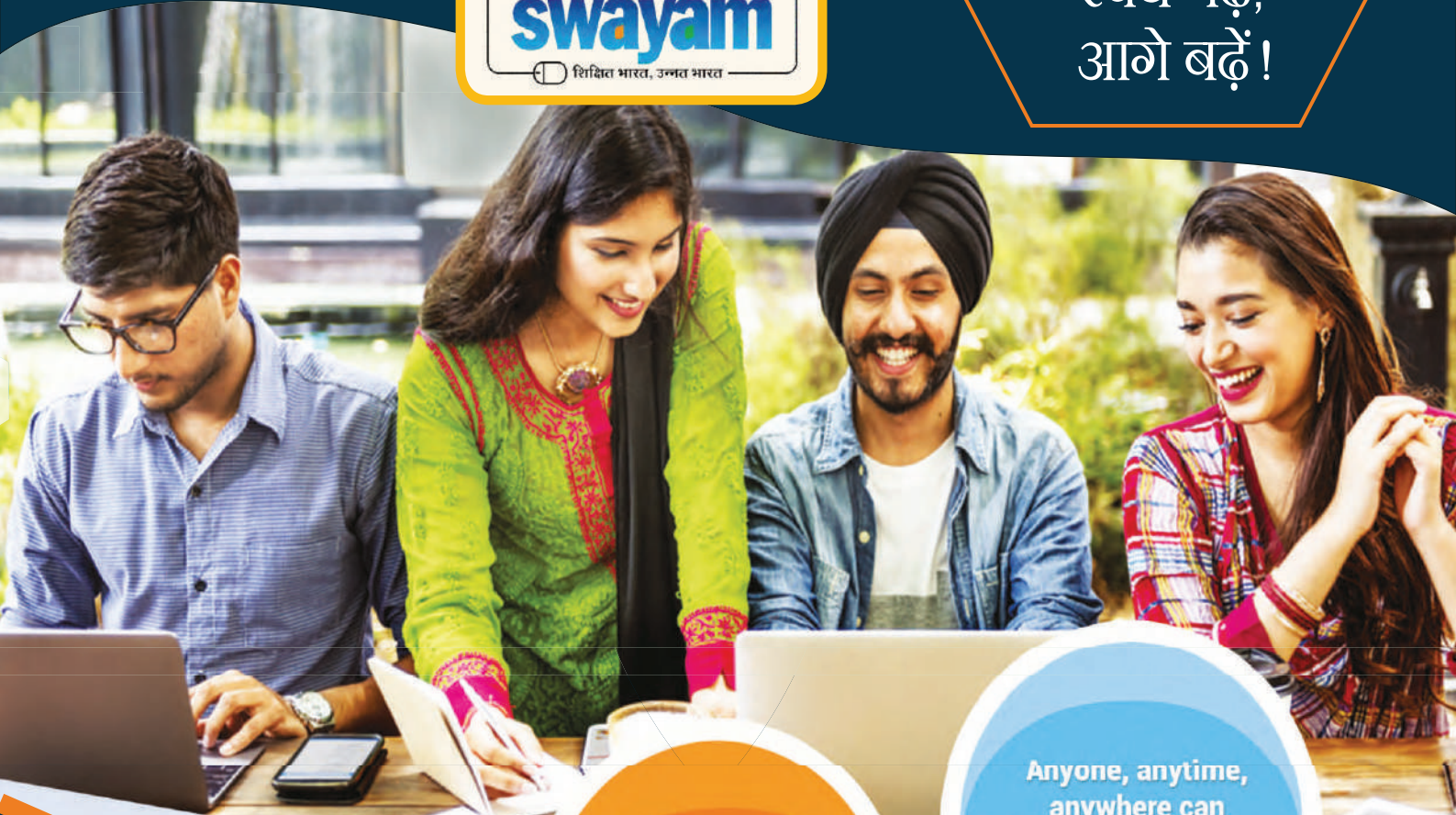


# SWAYAM Courses: At a Glance



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आगे बढ़ें!



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free.



Ministry of Human Resource Development  
Government of India

July 2018



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## Message of the Chairman



The Indian higher education system is one of the oldest and largest in the world with 903 universities including Institutions of National Importance, 41, 012 colleges, 3.66 crore students and 12.84 lakh teachers. This massification of higher education brings along with it many issues which confront the higher education of our country today like, the issues of access, equity, relevance, quality, management and financing.

The ICT plays a major role in addressing these issues. In this context, Massive Open online courses are very successfully bridging the digital divide as through these courses quality education can be brought at the doorstep of every learner at virtually no cost. I congratulate the Ministry of Human Resource Development for this noble initiative which will bring a marked improvement in the quality of education being imparted in our country. The project would also help the students and teachers to update their knowledge and skills especially for those located in rural/backward/remote areas and would help the nation move towards an information-rich society.

I congratulate, Prof Rajnish Jain, Secretary, UGC, Dr(Mrs) Pankaj Mittal, Additional Secretary, UGC and her team in bringing out this document which will be very handy information booklet for our Vice Chancellors.

Wishing you all the best.

Prof. D P Singh  
Chairman, UGC

## Foreword



The phenomenal growth of ICT in the education system has had a tremendous impact globally. India has been quick enough to leverage technology for teaching learning processes as ICT has facilitated the accessibility to education and promoting quality teaching and learning to learners of all age groups across the length and breadth of the country. Taking cognizance of such advancements, the Ministry of Human Resource Development, Government of India launched SWAYAM (Study Webs of Active Learning for Young Aspiring Minds), an indigenously developed platform aimed at providing learning opportunities to the learners through MOOCs (Massive Open Online Course) free of cost in a structured manner.

MHRD has identified nine National Coordinators for developing MOOCs from School to PG level on the platform, namely- NCERT for school education from 9th to 12th; NIOS for out of school children from 9th to 12th; Consortium for Educational Communication (CEC), an IUC of UGC, for Non-technology UG programmes; UGC for Non-technology PG programmes; IGNOU for Diploma and Certificate programmes; NPTEL for Technical/ Engineering UG & PG degree programmes; IIM for management programmes, NITTR, Chennai for Teacher Training programmes and AICTE for self paced programmes.

The MOOCs courses on Swayam being run by these National Coordinators (except for NPTEL) in the coming semester beginning from July, 2018 are compiled in this document for easy reference of the Vice Chancellors and academicians.

I compliment my colleagues, Dr (Mrs) Pankaj Mittal, Additional Secretary, UGC and Dr Diksha Rajput, Publication Officer and her team in editing and compiling this document which will work as a ready reckoner for our users.

My Good Wishes for all.

Prof Rajnish Jain  
Secretary, UGC

## Preface



The MOOCs on the SWAYAM are high quality, curriculum-based, interactive content in different subjects across disciplines of social sciences, arts, fine arts, humanities, natural & mathematical sciences, linguistics, languages, technology, management, teacher training and skill sector. These courses are developed by the best faculty of the country carefully chosen from various educational institutions across the country from Secondary till Post-Graduation level. The basic philosophy of MOOCs on SWAYAM is free learning for Any one, Any time, Any where (AAA) with the facility of credit transfer for upto 20% of the courses in a programme.

The MOOCs on SWAYAM follow a Four Quadrant Approach comprising of Quadrant-I - e-Tutorial, which contains Video and Audio Content in an organised form, Animation, Simulations, video demonstrations, Virtual Labs, etc. , Quadrant-II - e-Content, which contains PDF, Text, e-Books, illustrations, video demonstrations, documents and Interactive simulations; Quadrant-III - Web Resources, Open source Content on Internet, Case Studies, books including e-books, research papers & journals, Articles, etc. and Quadrant-IV - Self-Assessment, which contains Problems and Solutions, which could be in the form of Multiple Choice Questions, Fill in the blanks, Matching Questions, Short Answer Questions, Long Answer Questions, Quizzes, Assignments and solutions, Discussion forum topics and setting up the FAQs, Clarifications on general misconceptions etc.

This document "SWAYAM Courses : At a Glance " is a compilation of the Courses developed by the Course Coordinators/Instructors of eight National Coordinators and gives a bird's eye view of the Course objectives, learning outcomes, course duration, credits and profile of the course coordinator for the learner. It is hoped that this document will enable learners and institutions to make informed choices about the MOOCs courses to be pursued in the coming semester, commencing from July, 2018.

The compilation and production of this document would not have been possible without the active support of my colleagues in UGC, Dr Diksha Rajput, Mr Abhishek Anand and in INFLIBNET, Dr Jagdish Arora and Dr Abhishek Kumar. I am grateful to them for their support.

Wishing you a happy learning.

Dr(Mrs) Pankaj Mittal  
Additional Secretary, UGC



University Grants Commission  
New Delhi



# Non-Technology Post Graduate Courses



MHRD



# Non-Technology Post Graduate Courses

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**PROF. BHUSHAN TRIVEDI, PH.D.**

Dean, Faculty of Computer Technology, GLS University,  
Ahmedabad

**TYPE OF COURSE** : UG as well as PG

**INTENDED AUDIENCE** : UG as well as PG

**COURSE DURATION** : 15 weeks (15/08/2018 to 15/12/2018)

**EXAM DATE** : 15/12/18 to 15/01/19

**NO OF CREDITS** : 4

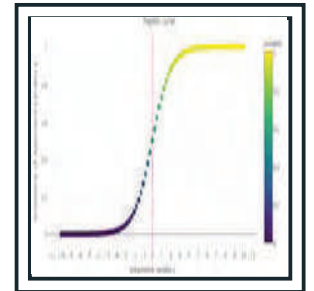
**PRE-REQUISITES** : Preliminary Maths, Data Structures, introduction to any programming language

**OBJECTIVE OF COURSE**

Introduce the idea of how computers and other devices can be made to act like humans and solve problems with techniques different than conventional methods of solving problems.

**LEARNING OUTCOME**

- Describe what state space search is, convert a given problem in state space form, devise a solution
- Differentiate heuristic methods to solve AI based problems, judge the method needed to solve a typical problem.
- Narrate problems in using guided search and find solutions to those problems
- List and judge different search methods and their usage in different cases
- Use AI in Game Playing, Planning, solving constraint satisfaction problems, and other related problems
- List different knowledge representation techniques, judge most suitable technique
- Describe characteristics of and differentiate conventional system from an Expert system.
- Generate algorithms reasoning with uncertain and incomplete information

**COURSE PLAN**

**W01:-** Introduction to AI and State space search

**W02:-** Introduction to unguided and guided search

**W03:-** problems in search and solutions, Genetic algorithms

**W04:-** Neural Networks, BPNN, learning process in BPNN

**W05:-** Some other search methods and Admissibility

**W06:-** Planning

**W08:-** Game Playing

**W09:-** Minimax and other game playing algorithms

**W10:-** Using predicate logic for Knowledge Representation

**W11:-** reasoning using Resolution and non-monotonic reasoning

**W12:-** Fuzzy logic and CD to represent knowledge in a stronger way

**W13:-** Scripts and Introduction to Expert systems

**W14:-** Developing expert systems and Machine learning

**ABOUT INSTRUCTOR**

Prof. Trivedi has 4 patents, 96 papers and 3 books all published by Oxford University Press. He has 29 years of experience in teaching at post graduate level. Nine of his students received a Ph. D. degree and 5 more are perusing. He has written two EPG Pathshala courses out of which one is repurposed to MOOC. One more of his course proposal is accepted for the next cycle. He has conducted 25 workshops on effective teaching and a few other on research related topics across India.



**PROF. DEEPAK H. KANNAL**

Former Head & Dean, Faculty of Fine Arts, M.S. University,  
Baroda

**TYPE OF COURSE** : UG/PG

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (2<sup>nd</sup> July'2018 to 13<sup>th</sup> Oct.'2018)

**EXAM DATE** : 15<sup>th</sup> Week of the course i.e 8<sup>th</sup> to 13<sup>th</sup> Oct. 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : The learners are expected to have completed Graduation in any discipline and have knowledge about theoretical aspect of Art and Art History

**OBJECTIVE OF COURSE**

The main objectives of this course are –

- to discuss the problems pertaining to aesthetics, which is also called philosophy of art.
- to understand the theoretical aspect of art. Every civilization whether it is western or Indian has given a thought to the problems of art and from that thought the aesthetic theories have emerged.
- to discuss the western theories as well as the Indian theories and comparative study of it.
- to understand the similarities between the two and also the differences and also trace their evolution independently and collectively.
- -to give a thought to the differences between the aesthetic thought and the critical theories.

**LEARNING OUTCOME**

This Course will help to develop the understanding of philosophy of art and theoretical aspect of art. Every civilization whether it is western or Indian has given a thought to the problems of art and from that thought the aesthetic theories have emerged. The learner will understand the western theories as well as the Indian theories and comparative study of it.

**COURSE PLAN**

**Week 01:-** 1. Aesthetics: A Comparative Study, 2. Evolution of Aesthetic Theorization in India. 3. Bharata and his Natyasastra

**Week 02:-** 4. Theory of Rasa and its later exponents – I, 5. Theory of Rasa and its later exponents – II, 6. Vritti, Riti and style

**Week 03:-** 7. Alamkara : The Embellishment, 8. Chitrasutra of Vishnudhar mottara, 9. Theory of Dhvani – Bhartrihari

**Week 04:-** 10. Dhvani- Lakshana, 11. Dhvani– Vyanjana and Anandavardhana, 12. Shadanga : the Six Principles of Painting

**Week 05:-** 13. The Talamana : Iconometry, 14. The Medieval Shilpa texts in India, 15. Plato and the theory of Mimesis

**Week 06:-** 16. Aristotle and the theory of Catharsis, 17. Horace and Longinus, 18. Medieval European Aesthetics

**Week 07:-** Assignment Week

**Week 08:-** 19. Renaissance Aesthetics, 20. Absolute Idealism, 21. Emanuel Kant and the Notion of Beauty

**Week 09:-** 1. Croce and Art as Intuition, 2. Sigmund Freud and Psychoanalysis I, 3. Sigmund Freud and Psychoanalysis II

**Week 10:-** 4. Psychoanalysis: Later Developments , 5. Formalism – Roger Fry and Clive Bell

**Week 11:** 6. Susanne Langer, 7. Feminist Aesthetics

**Week 12:-** 8. Sublime- Rediscovery, 9. Sublime- Post Modern view – Lyotard

**Week 13 :-** 10. Structuralism I, 11. Structuralism II, 12. Post-structuralism

**Week 14 :-** 13. Deconstruction, 14. Marxist Theories.

**Week 15 :-** Final Exam

**ABOUT INSTRUCTOR**

Prof. (Dr.) Deepak Kannal is a practicing sculptor and an Art Historian. He has a number of National level awards, scholarships and distinctions including the 'Charles Wallace fellowship' for his post doctoral project at Cambridge, UK, The National Lalit Kala commendation, Gujarat Lalitkala awards for sculpture, A.P. Council Biennale award and the Gujarat Gaurav as well as the Raja Ravi Verma Puraskar. He has curated sculpture shows in India and US and has participated in several important shows.

He taught in the Dept. of Art History and Aesthetics and also was the Head of the department, coordinator, UGC DSA program and the Dean of the Faculty of Fine Arts, Maharaja Sayajirao University of Baroda. He has worked on several prestigious bodies and committees of various institutions, Govt. Of India, University Grants Commission and a number of Universities. He is engaged in active research in Art History and Aesthetics and





### PROF. I K RAVICHANDRA RAO

Retd Professor, Documentation Research and Training Centre,  
Bangalore

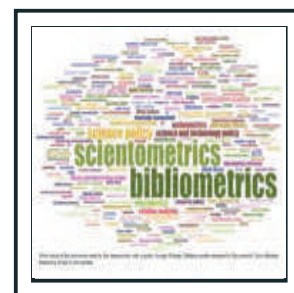
<b>TYPE OF COURSE</b>	: PG	<b>COURSE DURATION</b>	: 10 weeks (13 <sup>th</sup> Aug to 28 <sup>th</sup> Oct, 2018)
<b>INTENDED AUDIENCE</b>	: UG/PG Students of Library & Information Science	<b>EXAM DATE</b>	: Date to be announced in December 2018
<b>PRE-REQUISITES</b>	: The learner should have basic knowledge of computers, acquaintance with traditional libraries using manual processes as well as computerized library operations and services offered by both types of libraries.		
		<b>NO OF CREDITS</b>	: 3

#### OBJECTIVE OF COURSE

The objective of the course is to impart in-depth knowledge on Bibliometrics and Scientometrics including its scope and definition, computational aspects, parameters and indicators. Another objective of the course is to instil skills in learners that would enable them to collect and analyse Bibliometrics and Scientometrics data. This course will help learners to read and understand the scientific literature in the field of Scientometrics.

#### LEARNING OUTCOME

After successful completion of the course, learners would gain in-depth knowledge about bibliometrics and scientometrics. Learners will develop skills to collect, analyse and evaluate bibliometric scientometric data. Learners will be able to read understand bibliometric scientometric literature; and to carry out research in Scientometrics.



#### COURSE PLAN

- Week 1:** Introduction to Scientometrics
- Week 2:** Classical Laws of Bibliometrics
- Week 3:** Use Studies
- Week 4:** Obsolescence of Literature
- Week 5:** Growth of Literature
- Week 6:** Scientometric Indicators
- Week 7:** Citation Analysis and Collaboration in Science
- Week 8:** National Mapping and Role of Scientometrics in Science Policy
- Week 9:** Research Methodology
- Week 10:** Testing of Hypotheses

#### ABOUT INSTRUCTOR

After completing BSc. in Mathematics and Statistics from the Mahatma Gandhi Memorial College, Udupi in 1968, Prof. Rao obtained his Master's degree in Statistics (M.Stat) and Diploma in Computer Science from Indian Statistical Institute, Kolkata in 1970. He also completed the Associateship in Documentation (1975) course from DRTC of the Indian Statistical Institute. He received his Ph.D. degree from the University of Western Ontario, Canada, in 1981. He joined Documentation Research and Training Centre (DRTC) of the Indian Statistical Institute (ISI) in Oct. 1970. Since June 1987, he was working as Professor at DRTC. Prof. Rao is also the Chief Editor and the Editor of the COLLNET Journal of Scientometrics and Information Management and SRELS Journal of Information Management respectively. He is a Fellow of the Society for Information Science, New Delhi.





### DR. DHANESWAR HARICHANDAN

Professor cum Director Incharge, University of Mumbai,  
Institute of Distance and Open Learning.

**TYPE OF COURSE** : PG Certificate

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (1<sup>st</sup> Aug to 10<sup>th</sup> Nov,2018)

**EXAM DATE** : 10th November 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduates/Post Graduates in any discipline especially students and teachers of B.Ed./D.El.Ed./M.Ed./M.A. Education.

#### OBJECTIVE OF COURSE

The broad objective of this Massive Open Online Course is to acquaint the learners with the idea of online learning at anytime, anywhere and any place. The learners will be exposed to the various facets of communication technologies used in education and elsewhere.

#### LEARNING OUTCOME

- After going through this course learners will be able to understand the Concept, Processes, Models and Media of Communication.
- Learners will also know about the Concept of Technology e-learning Legal concept of technology and ICT in Education
- The learners will be exposed to contemporary technologies such as Spoken Tutorials, OER, MOOCs etc.



#### COURSE PLAN

**Week 1:** Basics of Communication

**Week 2:** Process of communication

**Week 3:** Communication Skill

**Week 4:** Concept of Technology of Education

**Week 5:** Trends and Methods in Communication

**Week 6:** Technical Aspects of Networking

**Week 7:** Role & Legal Aspects of Technology

**Week 8:** ICT in Education

**Week 9:** Technology for Development

**Week 10:** E-Learning

**Week 11:** Learning Management Systems

**Week 12:** Contemporary Technologies

**Week 13:** Open Education

**Week 14:** Use of Tutorials

**Week 15:** Role of National Bodies

#### ABOUT INSTRUCTOR

Dhaneswar Harichandan (born on 11<sup>th</sup> October, 1960) is Professor cum Director Incharge, Institute of Distance and Open Learning, University of Mumbai. He holds a Ph.D. degree in Distance Education from YCMOU, Nashik. He has more than three decades of experience as a teacher educator in face-to-face classroom teaching as well as distance education mode and has guided 7 students at M.Phil. and 6 students at Ph.D. level. He has published 5 books, edited 14 Self Learning Materials, 4 chapters in edited books, 24 articles and research papers in National and International journals and has organised, participated and contributed papers in workshops, seminars & conferences. He is an Ambassador for advocacy of OER by ICDE Norway, Oslo.



**DR. JAGDISH ARORA**

Director, Information and Library Network Centre, (INFLIBNET)

<b>TYPE OF COURSE</b>	: PG	<b>COURSE DURATION</b>	: 15 weeks (13 <sup>th</sup> Aug to 26 <sup>th</sup> Nov, 2018)
<b>INTENDED AUDIENCE</b>	: LIS Students at PG/UG level Lifelong learning	<b>EXAM DATE</b>	: Date to be announced in December 2018
<b>PRE-REQUISITES</b>	: The learner should have basic knowledge of computers, acquaintance with traditional libraries using manual processes as well as computerised library operations and services offered by both types of libraries.		
		<b>NO OF CREDITS</b>	: 5

**OBJECTIVE OF COURSE**

The objective of the course is to impart in-depth knowledge on digital libraries, their characteristics, components, standards and protocols, IPR and legal issues, digital rights and access management, planning and evaluation. The ultimate aim of the course is to instil skills in learners that would enable them to evaluate commercially available digital libraries before subscribing them for their institutions as well as to set-up their own institutional digital library with all intermediate steps involved in it from planning to offering digital library services.

**LEARNING OUTCOME**

After completing the course, the learner would gain in-depth knowledge about digital libraries, their characteristics and major components. The course elaborates on technology, processes and steps involved in digitization and digital preservation. It enunciates on applications and services offered by digital library and its relationship with semantic web. It delves into the process of planning, implementation, marketing, promotion and evaluation of digital libraries. Learners would have insights into various aspects of digital rights and access management and its applications in digital libraries. The course also elaborates on examples of open access digital libraries and backend technologies used.

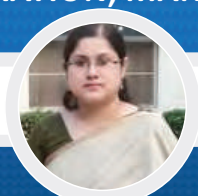
**COURSE PLAN****Week 1:** Digital Library: Overview**Week 2:** Major Components of Digital Library - 1**Week 3:** Major Components of Digital Library – 2**Week 4:** Major Components of Digital Library – 3**Week 5:** Digital Libraries: Planning, Implementation, Marketing and Promotion**Week 6:** Digital Library: Standards, IPR and Legal Issues**Week 7:** Major Projects in Digital Libraries**Week 8:** Digital Library Initiatives in India**Week 9:** Open Access and Digital Library**Week 10:** Digitization**Week 11:** Digital Library Services and Semantic Web**Week 12:** Digital Rights Management / Access Management**Week 13:** Digital Preservation**Week 14:** Case Studies in Digital Library**Week 15:** Evaluation of Digital Library**ABOUT INSTRUCTOR**

Dr. Jagdish Arora, is the Director of Information and Library Network (INFLIBNET) Centre from August, 2007 onwards. Prior to his present assignment, Dr. Arora has worked as the Librarian at the Indian Institute of Technology Delhi from Sept. 2003 to August 2007. Dr. Arora is recipient of Fulbright Professional Fellowship in Library and Information Science (1997- 98), Dr. Arora was presented a Citation and Memento for his Commendable Contribution to Digital Initiatives for Higher Education, by the Honourable Shri Pranab Mukherjee, Govt. of India on 9th July 2017 at Vigyan Bhawan, New Delhi. He was also recipient of Librarian's Choice Award for Life Time Achievement instituted by the Royal Society of Chemistry for the year 2017. He was awarded NDLT Leadership Award for the year 2017 for Shodhganga Scheme of the INFLIBNET Centre during 20th International Symposium on Electronic Theses and Dissertations held in Washington, D.C., USA from August 7 to 9, 2017. Dr. Arora was the Principal Investigator for several projects sponsored by agencies like AICTE, Deptt. of Biotechnology (DBT), Ministry of Information Technology (MIT), Ministry of Human Resource Development (MHRD), etc. He was a member of the delegation that visited selected libraries and library science schools in Germany in 2002.





**PROF. AMARENDRA P. BEHERA**  
Joint Director, CIET-NCERT,  
New Delhi



**DR. AERUM KHAN**  
Assistant Professor,  
CIET-NCERT, New Delhi



**PROF. P.K. SAHOO**  
Professor, University of  
Allahabad, Allahabad



**DR. SURINDER PAL KAUR DHILLAN**  
Principal, Khalsa College of  
Education, Amritsar

**TYPE OF COURSE : PG**

**INTENDED AUDIENCE : PG**

**PRE-REQUISITES : Basic understanding of the management process, administration structure, leadership patterns of school education.**

**COURSE DURATION : 35 weeks (2 July 2018 – 3 March 2019)**

**EXAM DATE : After completion of course in March 2019, to be organised Jointly by University of Allahabad and CIET-NCERT**

**NO OF CREDITS : 4**

## OBJECTIVE OF COURSE

After completing this course the learners will be able to:

- Discuss the meaning/concept and common features of Educational Administration, Management and Governance, and leadership.
- Describe the history of educational administration, educational management and leadership.
- Elaborate the functions and approaches of Educational Administration, educational management and leadership.
- Describe the academic support structures like NUEPA, NCERT, SCERT, SIEMAT, DIETs.
- List the role of research and evaluation in Educational Administration Management and Governance.
- Discuss the issues and trends in Educational Administration Management and Governance.
- Enumerate the challenges in Educational Administration Management and Governance.

## LEARNING OUTCOME

- This course is intended to apprise the students about
- The meaning/concept and common features of Educational Administration, Management and Governance, and leadership.
- The History of educational administration, educational management and leadership.
- The functions and approaches of Educational Administration, educational management and leadership.
- The institutions related to Educational Administration Management and Governance.
- Academic support structures like NUEPA, NCERT, SCERT, SIEMAT, DIETs.
- Role of research and evaluation in Educational Administration Management and Governance.
- Issues and trends in Educational Administration Management and Governance.
- Challenges in Educational Administration Management and Governance.



## COURSE PLAN

**Week 1:** Concept and approaches to educational administration, management and governance

**Week 2:** Theories of educational administration

**Week 3:** Federalism and Decentralization in educational administration and management

**Week 4:** Multi-level system of educational administration, management and governance

**Week 5:** Comparative study of multi-level systems of educational administration among some developed and some developing countries

**Week 6:** Development of educational administration in India in Pre-British era- A historical perspective

**Week 7:** History and structure of educational administration during British period

**Week 8:** Assignment 1

**Week 9:** Landmarks in the development of educational administration in India after independence, Constitutional provisions governing educational administration in India- sharing of powers

**Week 10:** State acts and rules related to educational administration in India- A critical appraisal

**Week 11:** Educational administration: structure, function and processes at the central government level

**Week 12:** Educational administration: structure, function and processes at the state government level

**Week 13:** Educational administration: structure, function and processes at the district and sub-district levels

**Week 14:** Administration and management of centrally sponsored programmes and schemes for improvement of school education- A critical analysis

**Week 15:** Assignment 2

**Week 16:** Principles and practices of supervision and monitoring of education system in India, School Supervision: Concept and Theories

**Week 17:** School standards and their evaluation

**Week 18:** Regulations and accountability mechanisms, regulatory bodies guiding the education system

**Week 19:** Code of conduct of teachers and professional ethics

**Week 20:** Academic support structures like NUEPA, NCERT, SCERT, SIEMAT, DIET

**Week 21:** Resource centres at block and cluster levels- structure and appraisal

**Week 22:** Programme evaluation

**Week 23:** Decentralization, local management and governance in education

**Week 24:** Decentralized and participatory school governance- what and why?

**Week 25:** Assignment 3

**Week 26:** Constitutional provisions and policy framework for decentralized educational governance in India, Role of Panchayati Raj institutions in management of education

**Week 27:** Community based structures for school governance

**Week 28:** Role of Civil society organizations in governance of education

**Week 29:** NGO's and community based organizations in school governance

**Week 30:** Emerging issues and problems of educational administration

**Week 31:** Human resource management in education, Teacher management and development issues

**Week 32:** Issues relating to management of continuing professional development of teachers

**Week 33:** Need and importance of research in Educational Administration

**Week 34:** Trend of research in Educational Administration: Gaps and priorities, Issues relating to management of public institutions

**Week 35:** Assignment 4

## ABOUT INSTRUCTOR

Prof. A.P. Behera is the Joint Director of CIET-NCERT. A Ph.D. in Education, he is working in NCERT since 1996 on various assignments, like Curriculum Development, ET and ICTs in Education, Development of e-Contents, Training of Teachers and Educators on ICTs in Education. Also involved in various research studies on ICT in Karnataka, Chandigarh, KVS and RCI. He has worked on piloting of UNESCO's General Education Quality Analysis Framework (GEQAF) in India.

Dr. Aerum Khan has been working in CIET-NCERT, New Delhi for more than 5 years. She has Ph.D. degrees in Botany and Education and teaching experience of more than 12 years. Her profile includes development and management of the National Repository of Open Educational Resources, providing training to teachers across the levels for ICT interventions, and academic coordination of ePGPathshala for the subject of 'Education' at CIET-NCERT. She has also developed 2 MOOCs in Chemistry for Sr. Secondary level at CIET-NCERT; these courses are available on SWAYAM.

Prof. P.K. Sahoo is from the Dept. of Education, Allahabad University, Allahabad. He is the Principal Investigator of the ePGPathshala for the subject of 'Education'.

Dr. Surinder Pal Kaur Dhillon is the Principal of Khalsa College of Education, Ranjit Avenue, Amritsar.



**DR. JAVAHAR LAL**

Associate Professor, Department of Sarva Darshan, Shri Lal Bahadur Shastri  
Rashtriya Sanskrit Vidyapeetha, New Delhi

**TYPE OF COURSE** : PG/ACHARYA  
**INTENDED AUDIENCE** : UG/PG/Diploma

**COURSE DURATION** : 15 weeks (01/08/2018 to 31/12/2018)  
**EXAM DATE** : Jan 2019  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : 1. सस्कृत का सामान्य ज्ञान होना चाहिये। 2. सामान्यरूप से दर्शन शास्त्र का परिचय होना चाहिये। 3. स्नातक उपाधि धारक होना चाहिये

**OBJECTIVE OF COURSE**

भारतीय दर्शनम्- एकः परिचयः इति मूल विषय मधिकृत्य पञ्चदशसप्ताहेषु चत्वारिंशत्पाठानाम् अध्ययनव्यवस्थानिर्मिता वर्तते। तत्र दर्शनमिति शब्दः नाम दृशिर प्रेक्षणे इति धातोः भावे ल्युट् प्रत्यये सति निष्पन्नः यस्यार्थः भवति आत्मसाक्षात्कारः। आत्मसाक्षात्कारसाधनप्रतिपादनम् एतेषां दर्शनशास्त्राणां मुख्यमुद्देश्यं भवति।

तच्च दर्शनं भारतीय परम्परायां मुख्यतः वैदिका वैदिक भेदेन द्विविधं भवति। वैदिकदर्शनं तावत्याय-वैशेषिक-सांख्य-योग-पूर्वमीमांसा-उत्तरमीमांसाभेदेन षड्विधं भवति। अवैदिकदर्शनञ्च चार्वाक-जैन-बौद्धदर्शनभेदेन त्रिविधं तत्रापि बौद्धानां चत्वारः सम्प्रदायाः सौत्रान्तिक-वैभाषिक-माध्यमिक-योगाचारभेदेन सन्ति। तेन अवैदिकदर्शनमपि षड्विधं भवति। अस्मिन् पाठ्यक्रमे एतेषां द्वादशदर्शनानां विषये भवन्तः पठिष्यन्ति। अस्य दर्शनशास्त्रस्य उद्देश्यं किम् इति विषये अत्र एतदेव वक्तुं शक्यते यत् प्रथमतः दर्शनशास्त्रं लोकशास्त्रं वर्तते। लोके अस्माभिः यदपि आचरते तत् सर्वं दर्शनमेव। अहिंसा-सत्य-अस्तेयादीनामाचरणं तावत् दर्शनमेव। अतः एतेषां दर्शनशास्त्राणां प्रतिपाद्यविषयाणां सम्यक् ज्ञानं सर्वेभ्यः एव भवेत्। एतदर्थम् अयं पाठ्यक्रमः भवतां समक्षं समुपस्थाप्यते।

**LEARNING OUTCOME**

- छात्राः दर्शनशास्त्रस्य विविधशाखानां परिचयात्मकं ज्ञानं करिष्यन्ति।
- तत्तत् दर्शनस्य, आचार्याणां तेषां च दार्शनिकसिद्धान्तानाम् ऐतिहासिकं विवरणं, तत् सम्बद्धानां दार्शनिकपदपदार्थानां च ज्ञानं प्राप्स्यन्ति।
- अयं पाठ्यक्रमः नैकेषां प्रतियोगितापरीक्षाणां कृते उपयोगी भविष्यति।

**COURSE PLAN**

SAN\_C3\_M1\_W1\_V चार्वाकदर्शनस्य परिचयः  
SAN\_C3\_M2\_W1\_V चार्वाकदर्शनम्  
SAN\_C3\_M3\_W1\_V चार्वाकदर्शनम्  
SAN\_C3\_M4\_W2\_V बौद्धदर्शनस्य उद्भवः विकासश्च  
SAN\_C3\_M5\_W2\_V बौद्धदर्शनस्य वैशिष्ट्यम्  
SAN\_C3\_M6\_W2\_V चार्वाकदर्शने प्रमाणमनुमानस्य खण्डनञ्च  
SAN\_C3\_M7\_W3\_V बौद्धजैनदर्शनस्य आचार्याः तत्कृतयश्च  
SAN\_C3\_M8\_W3\_V सर्वदर्शनसंग्रहः - चार्वाकमतस्य खण्डनम्, अनुमानस्य प्रामाण्यव्यवस्थापनञ्च  
SAN\_C3\_M9\_W3\_V बौद्धतन्त्रवाङ्मयस्येतिहासः  
SAN\_C3\_M10\_W4\_V प्रतीयसमुत्पादवादः  
SAN\_C3\_M11\_W4\_V हीनयानस्य सम्प्रदायः स्थविरवादः - एकः परिचयः  
SAN\_C3\_M12\_W4\_V शून्यवादः  
SAN\_C3\_M13\_W5\_V  
SAN\_C3\_M14\_W5\_V  
SAN\_C3\_M15\_W5\_V क्षणिकत्वपक्षे जैनबौद्धाभिमतविमर्शः  
SAN\_C3\_M16\_W6\_V जैनदर्शनस्य उद्भवः विकासश्च  
SAN\_C3\_M17\_W6\_V जैनदर्शनस्य सारः  
SAN\_C3\_M18\_W6\_V अर्हतः स्वरूपनिर्देशः  
SAN\_C3\_M19\_W7\_V रत्नत्रयधर्मः  
SAN\_C3\_M20\_W7\_V जीवाजीवतत्त्वद्वयम्  
SAN\_C3\_M21\_W7\_V जीवाजीवद्रव्याणि

31/10/2016

SAN\_C3\_M22\_W9\_V सप्ततत्त्वानि

SAN\_C3\_M23\_W9\_V सप्तभङ्गीनयविमर्शः

SAN\_C3\_M24\_W9\_V जिनदत्तसूरिनिर्दिष्टं किञ्चित्

SAN\_C3\_M25\_W10\_V न्यायदर्शनस्य उद्भवः विकासश्च

SAN\_C3\_M26\_W10\_V न्यायदर्शनस्य परिचयः

SAN\_C3\_M27\_W10\_V अक्षपाददर्शनस्य परिचयः

SAN\_C3\_M28\_W11\_V आह्निकानां प्रकरणानाञ्च परिचयः

SAN\_C3\_M29\_W11\_V प्रमाणादिपदार्थनवक निरूपणम्

SAN\_C3\_M30\_W11\_V वादादिपदार्थसप्तकनिरूपणम्

SAN\_C3\_M31\_W12\_V अपवर्गनिरूपणम्।

SAN\_C3\_M32\_W12\_V ईश्वरसिद्धिः

SAN\_C3\_M33\_W12\_V वैशेषिकदर्शनस्य उद्भवः विकासश्च

SAN\_C3\_M34\_W12\_V वैशेषिकदर्शनस्य परिचयः

SAN\_C3\_M35\_W13\_V सांख्यदर्शनस्य उद्भवः विकासश्च

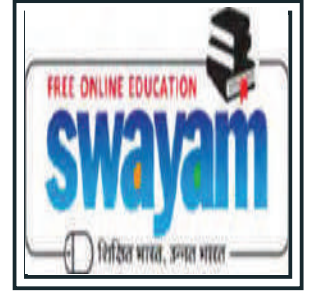
SAN\_C3\_M36\_W13\_V योगदर्शनस्य उद्भवः विकासश्च

SAN\_C3\_M37\_W13\_V साङ्ख्ययोगदर्शनयोः परिचयो

SAN\_C3\_M38\_W14\_V मीमांसादर्शनस्य उद्भवः विकासश्च

SAN\_C3\_M39\_W14\_V वेदान्तदर्शनस्य उद्भवः विकासश्च

SAN\_C3\_M40\_W14\_V मीमांसावेदान्तदर्शनयोः परिचयः

**ABOUT INSTRUCTOR**

Dr. Jawahar Lal is working as assistant professor in the Department of Sarvadarshan at shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeeth, Qutub Institutional Area, New Delhi, 110016, since 2004. He has received his Bachelors degree and Post graduate degree from the Banaras Hindu University, Varanasi. He has completed his Ph.D in the subject 'दार्शनिक दृष्टि से सृष्टि एवं प्रलय सिद्धान्त की समीक्षा' from the Department of vaidic darshan, faculty of Sanskrit vidya dharm vigyan samkay, Banaras Hindu university, Varanasi. He has published thirty research articles/book chapters and a book.





## PROF. DEVIKA P MADALLI

Professor at Indian Statistical Institute Bangalore Centre

<b>TYPE OF COURSE</b> : PG	<b>COURSE DURATION</b> : 11 weeks (13 <sup>th</sup> Aug to 29 <sup>th</sup> Oct, 2018)
<b>INTENDED AUDIENCE</b> : LIS Students at PG/UG level Lifelong learning	<b>EXAM DATE</b> : Date to be announced in December 2018
<b>PRE-REQUISITES</b> : The learner should have basic knowledge of computers, acquaintance with traditional libraries using manual processes as well as computerized library operations and services offered by both types of libraries.	<b>NO OF CREDITS</b> : 3

### OBJECTIVE OF COURSE

The objective of the course is to impart in-depth knowledge on information storage and retrieval, right from foundational definitions, components of multimedia resource retrieval systems, functions and design of ISAR systems, evaluation and advanced topics such as natural language processing and semantic web in information retrieval. Topics of information extraction and statistical methods in IR will be covered. The ultimate aim of the course is to instil skills in learners that make them aware of the importance of information storage and retrieval in the information profession and to learn methods of IR, systems, querying and query processing. Knowledge of ISAR will empower the students to handle and manage ISAR systems efficiently and effectively.



### LEARNING OUTCOME

The course is designed for the students of library and information science as well as for professionals working in library and information centres. Other learners interested in digital libraries may also take up the course. The course imparts in-depth knowledge on Information Storage and Retrieval. It provides insights on query formulation and querying of information in the Information Storage and Retrieval.

### COURSE PLAN

- Week 01:** Introduction and Basic Concepts and Components of IR Systems
- Week 02:** Database Management Systems, the Physical Organization of Data
- Week 03:** Querying of the Information Retrieval System
- Week 04:** ISAR Systems: Functions and Design, ISAR Models
- Week 05:** Evaluation and Measurement of Information Retrieval System
- Week 06:** Multimedia Information Retrieval
- Week 07:** Users of Information Retrieval
- Week 08:** Evolutions in Information Retrieval
- Week 09:** Advanced Course in ISAR
- Week 10:** Statistical Methods in IR
- Week 11:** Information Extraction

### ABOUT INSTRUCTOR

Prof. Devika P Madalli is a Professor at the Documentation Research and Training Centre, Indian Statistical Institute, India and Adjunct faculty, DISI, University of Trento, Italy. Her interest is in the area of knowledge organization and application of facetization in information systems, information infrastructures, digital libraries, semantic web technologies, faceted ontologies, content management system, multilingual information services and e-learning. She served as a member of Evaluation Committee of UNFAO statistical database and information services, FAOSTAT. She is a member of the Karnataka Evaluation Authority. She contributed to UNESCO's Global Open Access Portal (GOAP). She is on the Advisory Board of Universal Decimal Classification. She is also a member of the G8+05 Data Infrastructures Working Group. She is co-chair of the Interest Group on Agricultural Data at the Research Data Alliance.







## DR USHA MUNSHI

Librarian, Indian Institute of Public Administration, New Delhi

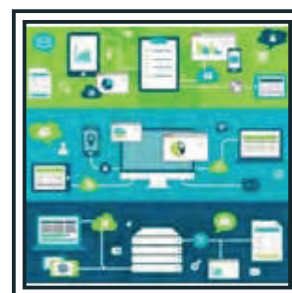
<b>TYPE OF COURSE</b>	: PG	<b>COURSE DURATION</b>	: 15 weeks (13 <sup>th</sup> Aug to 26 <sup>th</sup> Nov, 2018)
<b>INTENDED AUDIENCE</b>	: LIS Students at PG/UG level Lifelong learning	<b>EXAM DATE</b>	: Date to be announced in December 2018
<b>PRE-REQUISITES</b>	: The learner should have basic knowledge of computers and acquaintance information and communication tools and it uses in the automated library environment.		

### OBJECTIVE OF COURSE

The objective of the course is to impart in-depth knowledge on use of information and communication technology in libraries and to prepare students either to work in a fully automated library that subscribes to resources in print as well as in electronic format or to set-up a modern library on their own. The aim of this course is to inculcate in-depth knowledge on use of information and communication technologies in libraries.

### LEARNING OUTCOME

After completing the course, the learner would gain in-depth knowledge on basic concepts and scope of ICT, its associated technologies and their evolution. It deals with functional units of computers and computer software including operating system, system software and application software including word processing, spreadsheet and database management system. The course also elaborates on various contemporary programming languages and their levels. During the course a learner will gain knowledge about library automation, integrated library management software packages and its functional modules including acquisition, cataloguing, circulation, serials control and OPAC.



### COURSE PLAN

- Week 1:** Basics of ICTs and Functional Units of Computers
- Week 2:** Computer Software: Operating System, Application Software and Programming Languages
- Week 3:** Basics of Computer Network: Types, Topologies, Switching Techniques, Media and Devices, Network Protocols
- Week 4:** Data Network and Network Security
- Week 5:** Basics of Internet and Search Engines
- Week 6:** Web 2.0 and Semantic Web
- Week 7:** Library Automation: Concept, Acquisition, Cataloging, Retro-conversion of Bibliographic Records
- Week 8:** Library Automation: Circulation, Serial Control, OPAC and Library Security Technology
- Week 9:** Library Automation: Case Studies using SOUL, Koha and LibSys
- Week 10:** Open Source Library Software and Library Standards MARC and Dublin Core
- Week 11:** Library Networks in India: INFLIBNET & DELNET
- Week 12:** Case Studies: Library Network in UK and USA
- Week 13:** Academic Library Consortia
- Week 14:** Library Consortium: UGC-INFONET Digital Library Consortium, INDEST-AICTE Consortium, e-Shodh Sindhu
- Week 15:** Open Data, Crowd Sourcing, Cloud Computing and Ethics in Cyberspace - Plagiarism

### ABOUT INSTRUCTOR

Dr. Usha Mujoo Munshi, a Fulbright scholar, is currently with Indian Institute of Public Administration (IIPA) as head of its library. She has over 155 research publications and a few books to her credit. Recipient of several national and international awards which include Raizada Memorial Award, for Young Information Scientist of the Society of Information Science (SIS); SIS Fellowship; Fulbright Fellowship; ASSIST International Best Paper Award by ASSIST, USA. Recently she has been elected as a member of Data Policy Committee of CODATA, International Council for Science (ICSU).





**MRS. RENU ARORA**

Former Head, Education and Training, NISCAIR, New Delhi

**TYPE OF COURSE** : PG  
**COURSE DURATION** : 15 weeks (13<sup>th</sup> Aug to 26<sup>th</sup> Nov, 2018)  
**INTENDED AUDIENCE** : LIS Students at PG/UG level  
**EXAM DATE** : Date to be announced in December 2018  
 Lifelong learning  
**NO OF CREDITS** : 5  
**PRE-REQUISITES** : The learner should have basic knowledge of Information, characteristics of information sources, library services, information institutions and role of library and information professionals in dissemination of information.

**OBJECTIVE OF COURSE**

Objective of course is to impart in-depth knowledge to the learners on the concept and need for information and to identify information sources best suited for specific information needs; to acquaint the learners with various reference, information and computerised services as these keep the information seekers up-to-date in their field of interest or specialization by providing timely information; and to identify organisations at national and international level and systems including library/information organisations and to explain the programmes and activities being undertaken by such organizations in promotion, coordination and development of library and information activities.



**LEARNING OUTCOME**

After successful completion of the course, learners will gain in-depth knowledge about 'Information Sources, Systems and Services'. He/she will develop skills to identify sources of information, viz. Documentary, non-documentary or current source of information'; various kinds of information services – anticipatory or responsive; and national and international level organisations and systems including library/information organisations that are engaged in promotion, coordination and development of library and information activities. In addition, learners would have also gained skills to set-up information sources/resources in their own institution by planning information services required by the users of the institution.

**COURSE PLAN**

- Week 1:** Information Sources, Systems and Services: Concept and Need for Information
- Week 2:** Types of Information Sources: Documentary, Non-Documentary and Sources for Current Information
- Week 3:** Reference Sources: Use and Evaluation Criteria, e-Information Sources
- Week 4:** Reference Sources: Dictionaries, Encyclopaedias, Handbooks and Yearbooks: Use and Evaluation
- Week 5:** Reference Sources: Geographical, Biographical, Bibliographical and other sources: Use and Evaluation
- Week 6:** Indexing & Abstracting Sources: Use and Evaluation
- Week 7:** Information Products: Types of information Products
- Week 8:** Information Users and User Studies
- Week 9:** Reference and Information Services
- Week 10:** Reference Interview, Literature Search & Search Techniques
- Week 11:** Role of various professionals in providing information services
- Week 12:** Information services
- Week 13:** Organisation of National and International Information Systems and Programmes
- Week 14:** International Information Systems: Services & Products: INIS, AGRIS and MEDLARS / MEDLINE
- Week 15:** National Information Systems and Programmes in Social Sciences and Humanities

**ABOUT INSTRUCTOR**

Mrs. Renu Arora has been working for over 38 years in the field of Library and Information Science. Her last appointment was as Head, Education & Training Division, CSIR-NISCAIR, New Delhi. She was Editor, Annals of Library and Information Studies, a quarterly journal of NISCAIR, and Coordinator, IGNOU Study Centre, NISCAIR, New Delhi. She has over 35 years of teaching experience in Library & Information Science; over 21 years of working experience in the area of technical editing, proof reading and technical communication. She conducted several training programmes in the field of library science.



**DR. AJMER SINGH MALIK**

Professor, Dept. of Public Administration, Kurukshetra University  
Kurukshetra, Haryana

<b>TYPE OF COURSE</b>	: PG	<b>COURSE DURATION</b>	: 15 weeks (6 <sup>th</sup> Aug to 18 <sup>th</sup> Nov, 2018)
<b>INTENDED AUDIENCE</b>	: Enrolled in PG Courses/ Civil Service Aspirants/In- Service Officers	<b>EXAM DATE</b>	: 18 <sup>th</sup> November, 2018
<b>PRE-REQUISITES</b>	: The learners are expected to have completed Graduation in any discipline.		
		<b>NO OF CREDITS</b>	: 4

**OBJECTIVES OF COURSE**

This course is prepared to acquaint the learners with the developments in the discipline which will help the learners to know its evolution and current status. After completing the course, the learner will be able to: understand the basic principles of an organization; familiarize with various approaches to the discipline of Public Administration; and also articulates the changes and impact of Globalization, ICT, etc. on the structure and functioning of administrative systems.

**LEARNING OUTCOME**

This Course will help to develop a basic understanding of the principles and issues of public administration which is essential to understand more complex issues concerning governance and administrative system and public well-being in general.

**COURSE PLAN****WEEK-1 :**

Public Administration: Meaning, Nature and Scope  
Evolution of Public Administration

**WEEK-2**

New Public Administration  
Globalization and Public Administration

**WEEK-3**

Approaches to Public Administration- Classical, Scientific and  
Bureaucratic  
Human Relations Approach  
Behavioural Approach

**WEEK-4**

Hierarchy  
Unity of Command

**WEEK-5**

Span of Control  
Control and Supervision

**WEEK-6**

Authority, Power and Responsibility  
Centralization and Decentralization

**WEEK-7**

Delegation and Deconcentration  
Line, Staff and Auxiliary Agencies

**WEEK-8**

Coordination  
Coordination – A Case Study

**WEEK-9**

9th WEEK FOR REVISION / PREPARING ASSIGNMENT

**WEEK-10**

Communication  
Decision Making

**WEEK-11**

Public Interest  
Ethics in Administration

**WEEK-12**

Paradigm Shift from Government to Governance  
Public Accountability

**WEEK-13**

Project Work

**WEEK-14**

REVISION

**WEEK-15**

EXAMINATION

**ABOUT INSTRUCTOR**

Dr A S Malik, Professor at Kurukshetra University Kurukshetra Haryana (India) teaching Public Administration to PG students and guiding research students since 1991. He has been the Chairman, Department of Public Administration and also the Coordinator, Special Assistance Programme (2011-16) sanctioned by University Grant Commission New Delhi. He is editing a bi-annual journal titled Public Affairs & Governance. At present he is also the President of Indian Public Administration Association.





**PROF. K. S. RAGHAVAN**

Visiting Scientist, Centre for Knowledge Analytics and Ontological Engineering, PES Institute of Technology, Bangalore

**TYPE OF COURSE** : PG  
**COURSE DURATION** : 15 weeks (13<sup>th</sup> Aug to 26<sup>th</sup> Nov, 2018)  
**INTENDED AUDIENCE** : LIS Students at PG/UG level  
**EXAM DATE** : Date to be announced in December 2018  
 Lifelong learning  
**NO OF CREDITS** : 3  
**PRE-REQUISITES** : There are no specific pre-requisites for registering for this course. However, it is expected that the learner has a clear understanding of the functions of libraries and information centres, and of library and information science as a discipline.

**OBJECTIVE OF COURSE**

The objective of the course is to provide the students with an understanding of the characteristics of knowledge societies, the major factors affecting transition to a knowledge society and the issues in and implications of knowledge society with focus on libraries and information centres. On completing the course a learner would be in a position to have an idea of the changing dimensions of information disciplines as a consequence of developments in the information / knowledge environment.



**LEARNING OUTCOME**

On completing the course, students will understand the notion and characteristics of knowledge societies and how they differ from information societies. Students will also have a clear understanding of the various dimensions of knowledge society and their implications for libraries and information centres.

**COURSE PLAN**

- Week 1:** Data, Information and Knowledge
- Week 2:** Communication
- Week 3:** Knowledge Society
- Week 4:** Digital Divide
- Week 5:** Copyright
- Week 6:** Intellectual Property Rights: Patents
- Week 7:** Right to Information and Censorship
- Week 8:** Information Security
- Week 9:** National Information Infrastructure (India)
- Week 10:** E-Commerce and E-Governance
- Week 11:** Social Media and Content Management Systems in Libraries
- Week 12:** Economics of Information
- Week 13:** Knowledge Management
- Week 14:** The Information Disciplines
- Week 15:** Information Society Vs. Knowledge Society

**ABOUT INSTRUCTOR**

Prof. Raghavan taught at Madras University from 1977 to 2005 at Dept. of Library & Information Science. He retired as Dean (Academic) of the University and Professor & Head of the Dept. of Library & Information Science. He was Professor at DRTC from 2005 to 2013. He was visiting Scientist, Centre for Knowledge Analytics and Ontological Engineering, a World Bank funded project at PES Institute of Technology, Bangalore, 2013-2016. He was Senior Fulbright Scholar at UCLA in 1987. He also served as Visiting Professor, Federal University of Minas Gerais, Belo Horizonte, Brazil in 2003 and at Nanyang Technological University, Singapore in 2015. He is editor of SRELS Journal of Information Management and on the editorial board of Knowledge Organization. He guided 12 PhD students at Madras University.



**PROF. RAGINI ROY**

Professor & Head, Dept. of Drawing & Painting, Dayalbagh Educational Institute  
(Deemed University), Dayalbagh, Agra

- TYPE OF COURSE** : UG/PG **COURSE DURATION** : 15 weeks (2<sup>nd</sup> July to 13<sup>th</sup> Oct.'2018)
- INTENDED AUDIENCE** : It is expected that aspirants, desirous of joining this programme as a whole or selecting some courses as a part of one's PG Programme of Studies in any other institution, should have the minimum knowledge of Visual Arts equivalent to that of graduation degree in any other subject or equivalent qualification from a recognized academic institution.
- EXAM DATE** : 15<sup>th</sup> Week of the course i.e.8<sup>th</sup>to13<sup>th</sup>Oct 2018
- NO OF CREDITS** : 4
- PRE-REQUISITES** : Students are required to go through the weekly planning carefully and, as far as possible, observe the works, as cited under demonstrations. All reading material are enlisted by modules in Quadrant 03. Wherever possible web links are indicated for an easy access of the learners.
- The course is ideally meant for PG course in Visual Arts and for those teachers of the subject who may wish to register and audit the course for additional information.
- OBJECTIVE OF COURSE** : Apart from the above, one who has the adequate proficiency in the field of visual arts, who may neither be a student nor a teacher, are also welcome to register themselves to enhance knowledge.

The objectives are to impart knowledge in the discipline at post-graduation level. Landscape paintings refer to the depiction of natural scenery, such as bodies of water, mountains, forests and valleys. The sky is usually a main element, and weather often plays a key role in the overall total composition. The course manifests all these aspects gradually through its content. The main emphasis is placed on learning through various mediums like Pencil, Charcoal, Dry Pastel, Oil Pastel, Watercolour, Gouache, Oil colour, Acrylic and Mix Media in different techniques. The main emphasis is placed on the enhancement of observation skill of the students. Care has been taken to present the content in a gradual manner to instil confidence in the minds of the students. The course has been designed to have parity with syllabi to be at par with those at national and international levels.

**LEARNING OUTCOME**

Students having completed the course are not only expected to be skilled in the taught visual art, but should also be able to develop an analytical mind to critically examine works of other artists, which are covered under the syllabus and also be able to understand those, which may have been suggested additionally in the assignment sections

**COURSE PLAN**

**Week 01:-** 1. Learning to see, 2. Warm & Cool colours, 3. Angles & Perspectives

**Week 02:-** 4. Scribbling, 5. Flower, Shrubs and Bushes, 6. Tree

**Week 03:-** 7. Snow, Water & Mountain, 8. Pencil Live, 9. Pencil Imagination

**Week 04:-** 10. Charcoal Live, 11. Charcoal Imagination, 12. Dry Pastel Live

**Week 05:-** 13. Dry Pastel Imagination, 14. Monochrome, 15. Watercolour Live

**Week 06:-** 16. Watercolor Imagination, 17. Watercolor opaque technique, 18. Wet on Wet

**Week 07:-** Assignment Week

**Week 08:-** 19. Gouache imagination, 20. Gouache on tinted paper, 21. Oil Pastel Live

**Week 09:-** 22. Oil Pastel Imagination, 23. Oil paint Live, 24. Oil paint imagination

**Week 10:-** 25. Impasto (Acrylic Live), 26. Acrylic Imagination, 27. Mix Media

**Week 11:-** 28. Stippling, 29. Glazing

**Week 12:-** 30. Sponge, 31. Moonlight

**Week 13:-** 32. Night Landscape, 33. Working with Complimentary Color

**Week 14:-** 34. From Photograph, 35. Final Landscape

**Week 15:-** Final Exam

**ABOUT INSTRUCTOR**

Professor Ragini Roy is an artist and senior teaching faculty. Since 1984, she has been affiliated with the Department of Drawing & Painting at the Faculty of Arts, Dayalbagh Educational Institute (Deemed University), Dayalbagh, Agra. Having obtained her Masters in Drawing & Painting and while working on her Ph.D. from Kanpur University in 1981, she taught there for a year.

She is a Professor since 2008, at the Department of Drawing & Painting, DEI. Her major contribution has been in the fields of Painting, Mural and History of Indian Art. She designed all courses for UG, PG and Doctoral Levels at her parent University and the same for many other institutions in the country too. A recipient of National Kalidas Award for her contribution in the field of Painting, she has remained chairperson of BOS, member of Faculty Board, Academic Council, Primary Body, Governing Body, Committee Social Welfare Scholarships (GN), Life Member of Rock Art Society of India, Life Member of All India Oriental Conference-Pune; All India Women's Conference and lately the Principal Investigator of e-PG Pathshala: Visual Arts and MOOCs.

Prof. Roy has to her credit the organization of a number of national seminars, workshops, group shows, exhibitions and artist camps. She has a good number of quality publications, paintings, murals and books to her credit also.





**PROF. DINESH K. GUPTA**  
Professor, V M Open University, Kota, Rajasthan

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : LIS Students at PG/UG level  
 Lifelong learning  
**PRE-REQUISITES** : The learner should have the foundational knowledge or working experience of libraries and information centres.

**COURSE DURATION** : 15 weeks (13<sup>th</sup> Aug to 25<sup>th</sup> Nov, 2018)  
**EXAM DATE** : Date to be announced in December 2018  
**NO OF CREDITS** : 5

**OBJECTIVE OF COURSE**

- To make learners aware about the concept of management, management theories and application of management in libraries and information centres;
- To familiarize learners with management techniques applied to libraries and information centres and knowledge centres; and
- To acquainted learners with the newer areas and techniques of library and information centres management.



**LEARNING OUTCOME**

On Successful completion of the course, a learner would be acquainted with Knowledge on following aspects:

- Meaning and scope of management in daily operations of libraries and information centres and also about the long term managerial implications;
- The evolution of management theories and its application to current practice in library and information centres;
- About the strategic planning, problem-solving and decision-making skills as applied to actual library and/or information services management;
- Articulating the mission and other drivers of a library and information centre in relation to the users they served;
- Utilizing appropriate theory and skills to create an environment of excellence within the library and information services; and
- Dealing with aspects of financial planning and management for library and information centres.

**COURSE PLAN**

- Week 1:** Concept of Management, Principles and Application in L& Centres, and Management Thoughts
- Week 2:** Change Management and Strategic Planning
- Week 3:** Operations Research and Planning
- Week 4:** Total Quality Management and Marketing
- Week 5:** Governance, Organizational Structure and Different Sections of a Modern Library
- Week 6:** House Keeping Operations: Selection, Acquisition and Technical Processing
- Week 7:** House Keeping Operations: Care, Preservation and digitization
- Week 8:** Human Resources Planning and Development
- Week 9:** Managerial Roles and Team Management
- Week 10:** Performance Analysis and Motivation
- Week 11:** Self Management and Communication
- Week 12:** Financial Planning and Management
- Week 13:** Statistics, Reporting and Management Information Systems
- Week 14:** Space, Event and Disaster Planning
- Week 15:** Management of Technologies

**ABOUT INSTRUCTOR**

Dinesh K. Gupta is Professor of Library & Information Sc. at Vardhaman Mahaveer Open University, Kota. He served as Member of Standing Committee of IFLA Education & Training Section, 2011-2015, IFLA Management and Marketing Section, 2003-2007 and 2007-2011 and also served as the Chair of the Jury of 'IFLA International Marketing Award' in 2009-2013. He served as a Member of the Selection Committee of South Asia LIS Award, 2012-2014. He has published three IFLA books by official publisher K. G. Saur/ De Gruyter Saur (Munich, Germany).



**PROF. BAGIRATHI NANDA**

Prof. Bhagirathi Nanda, Professor & HOD Department of Sahitya, Shri Lal Bahadur Shastri Rastriya Sanskrit Vidyapeetha, Qutub Institutional Area, New Delhi-16

**TYPE OF COURSE** : PG/ACHARYA

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 15 weeks (01/08/2018 to 31/12/2018)

**EXAM DATE** : 04/01/2019

**NO OF CREDITS** : 6

**PRE-REQUISITES** : संस्कृतभाषां पठितुम्, अवगन्तुं, लिखितुं च सामर्थ्यम्

**OBJECTIVE OF COURSE**

अस्य पाठ्यपत्रस्य नाम "साहित्यशास्त्रं सौन्दर्यशास्त्रञ्च" इति। अत्र चत्वारिंशत् पाठाः सन्ति। अस्मिन् पत्रे नाट्यशास्त्रम्, दशरूपकम्, काव्यालङ्कारः, काव्यालङ्कारसूत्रवृत्तिः, काव्यादर्शः, ध्वन्यालोकः, काव्यप्रकाशः, साहित्यदर्पणम् इति एभ्यः ग्रन्थेभ्यः पाठाः संकलिताः सन्ति। तत्र नाट्यशास्त्रात् प्रथमाध्यायः, दशरूपकस्य प्रथमाध्यायः, काव्यालङ्कारस्य प्रथमपरिच्छेदः, काव्यालङ्कारसूत्रवृत्तेः प्रथमाधिकरणम्, काव्यादर्शस्य प्रथमाध्यायः, ध्वन्यालोकस्य प्रथममाननम्, काव्यप्रकाशस्य प्रथमोल्लासः, साहित्यदर्पणस्य प्रथमः परिच्छेदः च इति पत्रेऽस्मिन् विषयाः संकलिताः सन्ति। तत्रापि नाट्यशास्त्रस्य चत्वारः, दशरूपकस्य चत्वारः, काव्यालङ्कारस्य चत्वारः, काव्यालङ्कारसूत्रवृत्तेः चत्वारः, काव्यादर्शस्य अष्टौ, ध्वन्यालोकस्य अष्टौ, काव्यप्रकाशस्य चत्वारः, साहित्यदर्पणस्य च चत्वारः पाठाः पाठ्यक्रमेऽस्मिन् सन्निहिताः सन्ति। काव्यनाट्ययोः सम्यक् परिचयार्थं पाठोऽयम् उपकल्पितो वर्तते, येन नाट्यशास्त्रकाव्यशास्त्रप्रवेशार्थं

**LEARNING OUTCOME**

अनेन पाठ्यांशमाध्यमेन :

- १.अध्येतारः साहित्यशास्त्रवाङ्मयेन सह परिचिताः भवितुमर्हन्ति।
- २.साहित्यशास्त्रे वर्णितानां विविधवैज्ञानिक-कला-सौन्दर्य-पक्षाणाम् अवगाहनञ्च कर्तुं समर्थाः भविष्यन्ति।
- ३.पाठ्यक्रमोऽयं विविधासु प्रायोगिकपरीक्षासु साफल्यमवाप्तये च उपकारको भविष्यतीति।

**COURSE PLAN**

**Week 01:-** नाट्यशास्त्रम् (परिचयः)

**Week 02:-** नाट्यशास्त्रम् (प्रथमाध्यायः)

**Week 03:-** दशरूपकम्

**Week 04:-** काव्यालङ्कारः

**Week 05:-** काव्यालङ्कारसूत्रवृत्तिः

**Week 06:-** काव्यादर्शः (काव्यादर्शप्रस्तावना)

**Week 07:-** काव्यादर्शः (काव्यमार्गः)

**Week 08:-** Assignment-I

**Week 09:-** काव्यादर्शः (काव्यगुणाः)

**Week 10:-** ध्वन्यालोकः (ध्वन्यालोकस्य परिचयः)

**Week 11:-** ध्वन्यालोकः (काव्यात्मनोःध्वनितत्त्वस्य पारम्पर्यम्)

**Week 12:-** ध्वन्यालोकः (अर्थानन्त्यं संवादश्च)

**Week 13:-** काव्यप्रकाशः

**Week 14:-** साहित्यदर्पणम्

**Week 15 :-** Assignment-II

**ABOUT INSTRUCTOR**

Prof. Bhagirathi Nanda, HOD Department of Sahitya, Shri Lal Bahadur Shastri Rastriya Sanskrit Vidyapeetha, Qutub Institutional Area, New Delhi-16

Teaching Experience- 24 Years (UG & PG Level)

Email: ibnanda2@gmail.com

Mob- 9911333950, Off. 011-46060624





**PROF. ZAHOOR AHMAD ZARGAR**  
 Ex-Dean, Faculty of Fine Arts, Jamia Millia Islamia,  
 New Delhi

**TYPE OF COURSE :** UG/PG  
**INTENDED AUDIENCE :** UG/PG

**COURSE DURATION :** 15 weeks (02/07/2018 to 13/10/2018)  
**EXAM DATE :** November/December, 2018  
**NO OF CREDITS :** 4

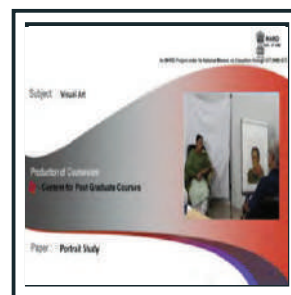
**PRE-REQUISITES :** Students are required to go through the weekly planning carefully and, as far as possible, observe the works, as cited under demonstrations. All reading material are enlisted by modules in Quadrant 03. Wherever possible web links are indicated for an easy access of the learners. The course is ideally meant for PG Course in Visual Arts and for those teachers of the subject who may wish to register and audit the course for additional information. Apart from the above, one who has the adequate proficiency in the field of visual arts, who may neither be a student nor a teacher, are also welcome to register themselves to enhance knowledge.

**OBJECTIVE OF COURSE**

The objectives are to impart knowledge in the discipline at post-graduation level. Portrait painting has been one of the important aspects of painting throughout the history of art in the world. Human portrait reflects the temporary feeling which roughly demonstrates one's individual personality and manners, besides the beautiful coordination of forms, colours and variety of moods. The course manifests all these aspects gradually through its content. The main emphasis is placed on the enhancement of observation skill of the students. Care has been taken to present the content in a gradual manner to instil confidence in the minds of the students. The course has been designed to have parity with syllabi to be at par with those at national and international levels.

**LEARNING OUTCOME**

Students having completed the course are not only expected to be skilled in the taught visual art, but should also be able to develop an analytical mind to critically examine works of other artists, which are covered under the syllabus and also be able to understand those, which may have been suggested additionally in the assignment sections.



**COURSE PLAN**

- Week 01:-** M1. The Head Learning to See, M2. Seeing and Interpreting Shapes, M3. Scribbling
- Week 02:-** M4. Sketching, M5. Structure of the Skull Drawing the Basic Shapes of the Head, M6. Positioning the Facial Features & Line of Expression
- Week 03:-** M7. The Head from Different Viewpoint and Major Planes of the Head, M8. Making the Head Look Three Dimensional and Features in an Inverted Triangle, M9. Using Tone to Create Three Dimension
- Week 04:-** M10. Measurement and Proportion, M11. The Facial Features-Eyes, M12. Nose and Ears
- Week 05:-** M13. Mouth and Chin, M14. Hair, M15. Method and Material
- Week 06:-** M16. Working with Complementary Color, M17. Warm & Cool Colors, M18. Light and Dark Colors
- Week 07:-** Assignment Week

- Week 08:-** M19. Quick Portrait Sketches in Pencil, M20. Portrait in Charcoal (Imagination), M21. Portrait in Charcoal (Live)
- Week 09:-** M22. Wet on Wet, M23. Allaprima, M24. Portrait in Dry Pastel (Imagination)
- Week 10:-** M25. Portrait in Dry Pastel (Live Model), M26. Portrait in Oil Pastel, M27. Portrait in Oil Paint (Realistic Portrait L)
- Week 11:-** M28. Portrait in Oil Paint (Impressionist Portrait L), M29. Portrait in Gouache
- Week 12:-** M30. Portrait in Acrylic, M31. Portrait in Mixed Media
- Week 13:-** M32. Glazing, M33. Final Touching
- Week 14:-** M34. Final Portrait (Part\_1), M35. Final Portrait (Part\_2)
- Week 15:-** Final Exam

**ABOUT INSTRUCTOR**

Prof. Zargar Zahoor was born in the blessed vale of Kashmir. Zahoor's talent manifested itself when he was still a boy, and by 1971 he decided to be an artist. In that year he was admitted to the prestigious M.S. University of Baroda. Prodigiously gifted as indeed he was, Zahoor had the fortune to work under the stalwarts of Indian art in Baroda including Ghulam Mohammad Sheikh, Jeram Patel, K.G. Subramanyam and others.

He is recipient of innumerable national and international awards and honours, Prof. Zahoor joined Jamia Millia Islamia, New Delhi in 1985 and rendered his services with full devotion till his retirement as Professor and Head of the Department of Applied Art in the year 2015. In the enormous range of his work and in its intrinsic qualities, Prof. Zargar Zahoor has, beyond doubt, achieved mastery in Landscape Painting and Portrait Painting as well as in Applied Art.

He has designed many books and given various special lectures at many places in India and abroad. Prof. Zahoor has to his credit many solo exhibitions and group shows. He was invited to many workshops as expert for awards and scholarships. His collection of paintings is spread all around the world.

In fact there is a strong consistency about the evolution of his work throughout his unremitting painting life. As a painter he is happy with the fleeting aspect of weather, avalanches and deluges. Of course they are not the only aspects of nature with which he is happy, nor is he obsessed with them. In fact, his refined brushstrokes can magically convey in paint a sense of enchanted serenity and tranquility at large. His scrutiny of nature composes a picture almost from the start but he could grow trees and rocks within. His innovation in technique enables him to create brilliant light by a harmony of light tones instead of by a contrast of light with dark tones. It is a simple impressionistic innovation but a revolutionary one.







### DR. SUNDAR NARAYAN JHA

Assistant Professor, Department of Veda, Shri Lal Bahadur Shastri Rastriya Sanskrit Vidyapeetha, Qutub Institutional Area, New Delhi-16

**TYPE OF COURSE :** PG/ACHARYA  
**INTENDED AUDIENCE :** UG/PG/Diploma

**COURSE DURATION :** 15 weeks (01/08/2018 to 13/10/2018)  
**EXAM DATE :** 10/12/2018  
**NO OF CREDITS :** 6

**PRE-REQUISITES :** अत्र पाठ्यक्रमे सर्वेषामपि अवकाशोऽस्ति । वैदिकसाहित्यानामवगाहनाय ये प्रयत्नशीलाः सन्ति, ये च वेदज्ञानपिपासवः, संस्कृतानुरागिणः, एम् ए विकल्पाधारित क्रेडिट प्रणाल्यां क्रेडिट प्राप्तुमिच्छुकाश्च सन्ति ते सर्वे अत्र प्रवेशमूर्हाः । अन्ये ये खलु सेवानिवृत्ताः तेषु प्रवेशं लब्धुमर्हन्ति । अस्मिन् पाठ्यक्रमे सर्वेऽपि पाठाः संस्कृतभाषामाध्यमेनैव पाठयिष्यन्ते । तस्मात् कारणात् संस्कृतं ये अवगच्छन्ति त एवात्र प्रवेशं स्वीकुर्वन्तु । अत्र सरलया संस्कृतगिरा एव पाठयितुं विद्वद्भिः प्रयासः कृतोऽस्ति इति तु महान् सन्तोषस्य विषयः ।

#### OBJECTIVE OF COURSE

वैदिकभाषा-वाङ्मय इति शीर्षकान्विते पाठ्यक्रमेऽस्मिन् भवन्तः ऋग्वेद-यजुर्वेद-सामवेद-अथर्ववेद-ब्राह्मण-उपनिषद्-निरुक्त-प्रातिशाख्यादीन् विषयान् पठिष्यन्ति । विद्वन्त्येव भवन्तो यत् विश्वस्य समस्तोषपि वाङ्मयेषु वैदिकवाङ्मयं समुद्रवदगाधम् अपारं गम्भीरञ्चास्ति । अत्र समस्तमपि ज्ञानविज्ञानात्मकं सूत्रं क्वचित् सूक्ष्मेन क्वचिच्च स्थूलरूपेण वर्णितमस्ति, अत एवोक्तं भगवता मनुना "सर्वज्ञानमयो हि सः" इति । अत्र श्रेयःशास्त्रं प्रेयःशास्त्रञ्चोभयं समभावेन समेधितमस्ति अतो वेदानामध्ययनेन ऐहिकानां पारलौकिकानाञ्च विषयाणां सम्यग्बोधो जायते । "यत्र विश्वं भवत्येकनीडम्" इत्युद्घोषो वर्तते वेदस्य तस्मात् समस्तमपि विश्वमेकीकर्तुं वेदानामध्ययनमनिवार्यमस्ति । अत्र वैयक्तिक-पारिवारिक-सामाजिक-नैतिक-चारित्रिक-आर्थिक-वैज्ञानिक-भौतिक-दैविक-आध्यात्मिकोन्नतेश्च सर्वाण्यपि आवश्यकानि सूत्राणि, विविधानि च साधनानि सुवर्णितानि सन्ति । विश्वबन्धुत्वस्य भावना यथाऽत्र वर्णितानि तथाऽन्यत्र क्वापि लभ्यते । अतः स्पष्टमेवास्ति यद्वेदानामध्ययनेन सर्वविधं कल्याणं सर्वविधञ्च ज्ञानं प्राप्तं भवति । यो वेदं जानाति स एव सम्यक्तया राजकार्यादिकमपि सञ्चालयितुं समर्थो भवति । तदुक्तं मनुना- सेनापत्यञ्च राज्यञ्च दण्डनेतृत्वमेव च । सर्वलोकाधिपत्यञ्च सर्वं वेदविदहर्ति ॥



#### LEARNING OUTCOME

अनेन पाठ्यांशमाध्यमेन :

1. अध्येतारः वैदिकवाङ्मयेन सह परिचिताः भवितुमर्हन्ति ।
2. वेदेषु वर्णितानां विविधवैज्ञानिकपक्षणाम् अवगाहनञ्च कर्तुं समर्थाः भविष्यन्ति ।
3. पाठ्यक्रमोऽयं विविधासु प्रायोगिकपरीक्षासु साफल्यमवाप्तये च उपकारको भविष्यतीति ।

#### COURSE PLAN

SAN\_C1\_M1\_W1\_V ऋग्वेदस्य परिचयः अश्विनोः सूक्तस्य आदितः षण्मन्त्रं यावत्  
SAN\_C1\_M2\_W1\_V अश्विनोः सूक्तस्य सप्तममन्त्रतः सञ्चविंशतितममन्त्रं यावत्  
SAN\_C1\_M3\_W1\_V इन्द्रसूक्तम्  
SAN\_C1\_M4\_W2\_V विश्वामित्रदीर्घसंवादसूक्तम्  
SAN\_C1\_M5\_W2\_V बृहस्पतिसूक्तम्, उषःसूक्तञ्च  
SAN\_C1\_M6\_W2\_V पूषः सूक्तम्, वरुणसूक्तञ्च  
SAN\_C1\_M7\_W3\_V विश्वेशां देवानां सूक्तम्  
SAN\_C1\_M8\_W3\_V कितवसूक्तम्  
SAN\_C1\_M9\_W3\_V पर्जन्यसूक्तम्  
SAN\_C1\_M10\_W4\_V वास्तोष्पतिसूक्तम्  
SAN\_C1\_M11\_W4\_V सरस्वतीसूक्तम्  
SAN\_C1\_M12\_W4\_V मितावरुणसूक्तम्  
SAN\_C1\_M13\_W5\_V मण्डूकसूक्तम्  
SAN\_C1\_M14\_W5\_V यमसूक्तम्  
SAN\_C1\_M15\_W5\_V यजुर्वेदस्य परिचयः  
SAN\_C1\_M16\_W6\_V शिवसंकल्पसूक्तोक्तमन्त्राणां पाठः  
SAN\_C1\_M17\_W6\_V रुद्रसूक्तोक्तमन्त्राणां पाठः  
SAN\_C1\_M18\_W6\_V उपनिषदां परिचयः  
SAN\_C1\_M19\_W7\_V यजुर्वेदीयब्राह्मण-ग्रन्थानां परिचयः  
SAN\_C1\_M20\_W7\_V विश्वरूपचार्वाक्यायिका  
SAN\_C1\_M21\_W7\_V ईशावास्योपनिषद्

SAN\_C1\_M22\_W9\_V तैत्तिरीयोपनिषद्  
SAN\_C1\_M23\_W9\_V भार्गवीवारुणीविद्या  
SAN\_C1\_M24\_W9\_V निरुक्तशास्त्रस्य सामान्यपरिचयः  
SAN\_C1\_M25\_W10\_V निरुक्तस्य प्रथमोऽध्यायः  
SAN\_C1\_M26\_W10\_V निरुक्तस्य द्वितीयोऽध्यायः  
SAN\_C1\_M27\_W10\_V निरुक्तस्य सप्तमोऽध्यायः  
SAN\_C1\_M28\_W11\_V सामवेदस्य परिचयः  
SAN\_C1\_M29\_W11\_V सामवेदस्य पवमानकाण्डस्य प्रथमा दशती  
SAN\_C1\_M30\_W11\_V सामवेदस्य पवमानकाण्डस्य द्वितीया दशती  
SAN\_C1\_M31\_W12\_V अथर्ववेदस्य परिचयः  
SAN\_C1\_M32\_W12\_V अथर्ववेदीया छन्दोयोजना  
SAN\_C1\_M33\_W12\_V अथर्ववेदे अलङ्काराः  
SAN\_C1\_M34\_W12\_V अथर्ववेदीयकल्पसूत्राणि  
SAN\_C1\_M35\_W13\_V अथर्ववेदे चिकित्सा  
SAN\_C1\_M36\_W13\_V अथर्ववेदीयोपनिषद्  
SAN\_C1\_M37\_W13\_V अथर्ववेदस्य ब्राह्मणग्रन्थः  
SAN\_C1\_M38\_W13\_V अथर्ववेद भाष्यम्  
SAN\_C1\_M39\_W14\_V तैत्तिरीयप्रातिशाख्यं सामान्यवर्णव्यवस्था  
SAN\_C1\_M40\_W14\_V तैत्तिरीयप्रातिशाख्यं विशेषवर्णव्यवस्था  
W15Assignment

#### ABOUT INSTRUCTOR

Dr.Sundar Narayan Jha, is working as Assistant Professor, Department of Veda, Shri Lal Bahadur Shastri Rastriya Sanskrit Vidyapeetha, Qutub Institutional Area, New Delhi-16 science 2007. He has received his Bachelors and post graduate degree from the kameshwar Singh Darbhanga Sanskrit University, Darbhanga, Bihar in Shukla Yajurveda. He received Ph.D. degree with the title पुरुषमेधयज्ञस्य समीक्षात्मकमध्ययनम् from the Shri Lal Bahadur Shastri Rastriya Sanskrit Vidyapeetha, New Delhi. He is also a D.Litt. from kameshwar Singh Darbhanga Sanskrit University, Darbhanga, Bihar. His research interests are in the area of Vedic studies. He has published 90 research articles and 07 books in the field of Vedic studies and Sanskrit.



**DR BHARTI YADAV**

Assistant Professor , National Law University Delhi

**TYPE OF COURSE** : PG/Certificate**INTENDED AUDIENCE** : PG/Certificate**COURSE DURATION** : 15 weeks (1<sup>st</sup> Aug to 31<sup>st</sup> Dec, 2018)**EXAM DATE** : 31 December, 2018**NO OF CREDITS** : 4

**PRE-REQUISITES** : Preliminary knowledge about Human Rights  
 Preliminary knowledge about Fundamental Rights  
 Preliminary knowledge about role of equal access to justice in growth and development of a country and its people.

**OBJECTIVE OF COURSE**

- Comprehend the historical background of access to justice developments
- Understand different forums of justice administration system in India
- Learn general laws ensuring equal access to justice
- Understand special laws ensuring equal access to justice
- Know equal access to justice provisions for vulnerable group
- Explore role of community participation in promoting equal access to justice
- Know scope of law school involvement in strengthening equal access to justice

**LEARNING OUTCOME**

- Comprehend the concept and historical background of access to justice
- Understand different forums of justice administration system in India
- Learn general & special laws ensuring equal access to justice
- Know equal access to justice provisions for vulnerable group
- Explore role of community participation and law schools in promoting equal access to justice

**COURSE PLAN****Week-1:** Concept & Historical Background of Access to Justice**Week-2:** Formal Access to Justice And Impediments to Access to Justice**Week-3:** Access to Justice and Alternate Dispute Resolution**Week- 4:** General Law for Access to Justice**Week-5:** Special Law for Access to Justice**Week-6:** Access to Speedy and Amicable Justice**Week-7:** Access to Justice and Administrative Adjudication**Week-8:** REVISION AND ASSIGNMENT WEEK**Week-9:** Access to Justice for Women**Week-10:** Access to Justice for Children**Week-11:** Access to Justice for Senior Citizens, BC,SC/ST and Disables**Week-12:** Access to Justice for Stakeholders of Justice Administration System**Week-13:** Access to Justice in commercial Transactions**Week-14:** Civil Society role in Promoting Access to Justice**Week-15:** REVISION, ASSESSMENT and Evaluation**ABOUT INSTRUCTOR**

Dr Bharti Yadav(B.A., LL.B., LLM., Ph.D., NET) has been a faculty at National Law University Delhi since 2012. Her areas of specialisation are Criminal Law, Research Methodology, Legal Aid and Clinical Legal Education. She has been a resource person at Haryana Institute of Public Administration and Gyan Darshan TV channel. She has twice offered seminar courses on criminal law at University of Wurzburg, Germany. She was invited by Justice Academy, Ankara, Turkey for addressing Judges and advocates on art of cross examination. She presided sessions on promoting justice education in 8th and 9th Global Alliance of Justice Education conference.





**PROF. (DR.) ANUPAMA GOEL**  
Professor of Law, National Law University, Delhi

**TYPE OF COURSE** : PG **COURSE DURATION** : 15 weeks (1/8/2018 to 31/12/2018)  
**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School **EXAM DATE** : 10/12/2018  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : For pursuing this course, students are required to be familiar with the following concepts:  
**Preliminary knowledge and interest about law**  
**Preliminary knowledge about constitution and its significance**  
**Preliminary knowledge about working of the government, political scenario**  
**Keeness to know regarding the relationship of the democratically elected government and the written constitution**

### OBJECTIVE OF COURSE

This Course deals with Fundamentals and Structures of Indian Government; it is specifically designed to give a complete overview and in-depth knowledge regarding the concerns and challenges faced by the modern constitutional governments and elaborately discusses the structure, procedures, powers and duties of governmental institutions. The Course analyses in detail the basic functions of a written constitution. Also, the theories and concepts relating to constitutionalism, federalism, judicial review, constitutional interpretation, etc. are reviewed. All the discussions in the Course are updated according to the latest position and the modifications made by judicial intervention

### LEARNING OUTCOME

After completing the MOOC course, you shall be able to

- To understand the basic concepts of democracy, republicanism, constitutionalism and to know about the constitutional theories, virtues and constitutional interpretation
- To study and analyse the quasi-federal nature of Indian Constitution and the basic function of a written constitution regarding the allocation of State power, the functions, powers and limits of the organs of state
- To analyse elaborately regarding the emergency and amendment procedures; the need for granting of special status or special provisions to some states
- To know about Panchayats, Municipalities, Scheduled and Tribal areas

### COURSE PLAN

#### FUNDAMENTALS & STRUCTURES OF INDIAN GOVERNMENT

**WEEK-01** : Constitutional History- Making of Indian Constitution, Democratic and Republican nature of Government

**WEEK-02** : Preamble, Constitutional Interpretation and Constitutionalism, Separation of Powers, Judicial Review

**WEEK-03** : Union and its Territory, Citizenship, Meaning and Concept of 'State'

**WEEK-04** : Parliament and State Legislatures, Parliamentary Practices and Procedures, Anti Defection Law and Schedule X, Parliamentary Privileges

**WEEK-05** : Legislative Relations between Union and States, Administrative and Financial Relations between Union and States

**WEEK-06** : Executive and Protection to Civil Servants, Public Service Commissions and Tribunals

**WEEK-07** : 'Judiciary' under the Indian Constitution (Powers, Jurisdiction and Procedure), Judicial Independence

**WEEK-08** : Revision and Assessment

**WEEK-09** : Judicial Appointments and Accountability-I, Judicial Appointments and Accountability-II- NJAC Judgment and Way Forward

**WEEK-10** : Panchayats, Municipalities and Co-Operative Societies, Elections in India

**WEEK-11** : Emergency Provisions, Amendment of the Constitution and Doctrine of Basic Structure

**WEEK-12** : Scheduled and Tribal Areas, Granting Special Status (J & K) and Special Provisions to States

**WEEK-13** : Official Language, Inter-State Trade and Commerce

**WEEK-14** : Special Provisions relating to Union Territories National Capital Territory of Delhi

**WEEK-15** : Revision, Assessment and Evaluation

### ABOUT INSTRUCTOR

Dr. Anupama Goel, Professor of law in National Law University, Delhi has been teaching law since 1996. She specializes in Constitutional Law, International Law, Human Rights, Tort Law and Consumer Law and has taught various subjects to undergraduate as well as post graduate students including Ph.D. students. Her doctoral thesis was titled "Social Justice and its Implementation with Special Reference to the State of Punjab," an elaborate theoretical as well as empirical study, was hugely acclaimed by ICCSR. She has published various papers on different areas of law in prestigious law journals.





### PROF. DEO SHANKAR NAVIN

Professor, Centre of Indian Languages, JNU,  
New Delhi

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (21<sup>st</sup> Aug to 04<sup>th</sup> Dec, 2018)

**EXAM DATE** : As per UGC decision

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduate

#### OBJECTIVE OF COURSE

हिन्दी के प्रमुख प्रश्नपत्र आधुनिक कविता खण्ड 2 में कोशिश रहेगी कि आधुनिक कविता की प्रवृत्तिगत विशेषताओं को रेखांकित कर शिक्षार्थियों को उस दिशा में विशेष अध्ययन के लिए उन्मुख कर दिया जाए।

#### LEARNING OUTCOME

- आधुनिक कविता के प्रमुख कवियों के काव्य-कौशल का साक्षात्कार करेंगे।
- युगीन परिस्थितियों में छायावादोत्तर कवि के स्वर के स्वरूप को समझेंगे।
- छायावादोत्तर राष्ट्रीय काव्यधारा के प्रमुख कवियों के काव्य लेखन से परिचित होंगे।
- समकालीन समय के प्रमुख कवियों तथा उनकी रचनाओं का आप साक्षात्कार करेंगे।



#### COURSE PLAN

##### Week 1:

Janshangharsh Aur Kavita, Nagarjun Ka Kavya-Kathay, Nagarjun Ki Kavya-Bhasha

##### Week 2:

Nagarjun Ki Kavitaon Ka Paath Vishleshan, Hindi Alochna Main Nagarjun Ka Mulyankan, Nagarjun Aur Shamsheer

##### Week 3:

Kaviyon Ke Kavi Shamsheer, Shamsheer Ki Kavitaon Main Prem Aur Saundarya

##### Week 4:

Shamsheer Ki Kavitaon Ka Paath Vishleshan-Bail, Shamsheer Ki Kavitaon Ka Paath Vishleshan-Tuti Huyee Bikhri Huyee, Hindi Alochna Main Shamsheer Ka Mulyankan

##### Week 5

Trilochan Shastri Ki Kavita Ka Vaishishtya, Kedarnath Agrawal Ki Kavita, Rashtriya Kavyadhara Ke Pramukh Kavi

##### Week 6

Khabar Aur Kavita : Raguveer Sahay, Raguveer Sahay Ka Kavya-Kathay

##### Week 7:

Raguveer Sahay Ki Kavya Bhasha, Raguveer Sahay Ki Kavitaon Ka Paath Vishleshan, Hindi Alochna Main Raguveer Sahay Ka Mulyankan

##### Week 8

Nayi Kavita Aur Shreekant Verma, Magadh Mithak Aur Yatharth, Magadh Main Rajneetik Chetna

##### Week 9

Magadh Ki Kavya Bhasha, Rajkamal Chaudhary Ki Kavitaon Ka Vaishishathay, Sathottari Hindi Kavita Aur Dhumil

##### Week 10

Dhumil Ki Kavitaon Main Vidroh, Dhumil Ki Kavitaon Ka Paath Vishleshan, Hindi Alochna Main Dhumil Ka Mulyankan

##### Week 11

Samkaleen Kavita Aur Kuwar Narayan, Kuwar Narayan Ka Kavya Kathay, Kuwar Narayan Ki Kavya Bhasha

##### Week 12

Kuwar Narayan Ki Kavitaon Ka Paath Vishleshan, Hindi Alochna Main Kuwar Narayan Ka Mulyankan

##### Week 13

Samkaleen Kavita Par Dhumil Ka Prabhav, Nayi Kavita Aur Kedarnath Singh

##### Week 14

Samkaleen Kavita Aur Jantantr, Samkaleen Kavita Ke Mulyankan Ki Samasyayen, Vyavshtha Se Vidroh Aur Aaj Ki Kavita

##### Week 15

Samkalin Samay Ke Vishishtha Kavi-1, Samkalin Samay Ke Vishishtha Kavi-2

#### ABOUT INSTRUCTOR

Deo Shankar Navin, <<https://deoshankar.wixsite.com/deoshankar>> working as Professor with Center of Indian Languages, JNU New Delhi, with more than 14 Years academic Experiences. Recipient of many awards -- Best Young Poet award by Hindi Akademi, Delhi in 1991, Uttar Pradesh Hindi Sansthan Sauhard Samman, 2013, DBD Koshi Samman-2015, Vidyapati Samman-2017, Bihar Govt. In his credit, 46 authored, Compiled, and translated Books, more than thirty chapter writings, around 300 Articles are published in both the languages--Hindi and Maithili in distinguished Books and Journals; while dozens of pieces are translated and published in many Indian and foreign Languages.





**BHASWATI GANGULI**

Professor, Department of Statistics, University of Calcutta

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 14 weeks (13/8/2018 - 16/11/2018)

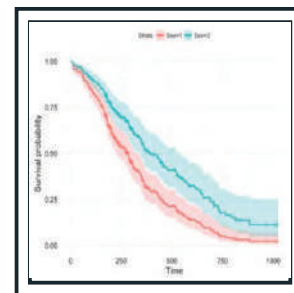
**EXAM DATE** : 20/11/2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Basic knowledge of statistical inference

**OBJECTIVE OF COURSE**

The purpose of the course is to familiarise students with the tools and methods required for a biostatistician. The course focuses on three areas viz. survival analysis, clinical trials and epidemiology. Basic concepts of survival analysis are defined and an introduction to parametric and Kaplan Meier estimation of the survival function provided. The Cox proportional hazards model, AFT models, frailty and competing risks are also discussed. Basic clinical trial design and variants such as the group sequential schemes are discussed. An introduction to alternative means for design and analysis of epidemiologic studies is provided. The course is supplemented by examples using R.



**LEARNING OUTCOME**

Tools and methods for survival analysis, clinical trials and epidemiology with implementation in R.

**COURSE PLAN**

- |  |                                       |
|--|---------------------------------------|
| Basic concepts of survival analysis                | MIDTERM EXAM                          |
| Parametric survival models                         | Play the Winner rule                  |
| Actuarial estimation                               | Randomised Play the Winner rule       |
| Kaplan-Meier estimators I                          | Crossover design                      |
| Kaplan Meier estimators II                         | Introduction to epidemiology          |
| Nelson Aalen estimators                            | Disease Frequency and Association I   |
| Equality of survival functions                     | Disease Frequency and Association II  |
| Mantel-Haenszl estimators                          | Disease Frequency and Association III |
| Cox's proportional hazards model                   | Observational studies                 |
| Estimation and inference for Cox's PH model        | Analytical studies                    |
| Partial Likelihood & Cox Proportional Hazard Model | Confounding                           |
| Diagnostics for Cox's PH model                     | Odds Ratio                            |
| The Accelerated Failure Time model                 | Cohort Studies I                      |
| Competing Risks model                              | Cohort Studies II                     |
| Introduction to Clinical Trials                    | Case Control Studies I                |
| Sample size determination for clinical trials      | Case Control Studies II               |
| Randomization                                      | Stratified Analysis                   |
| Group sequential design I                          | Matched Analysis I                    |
| Group sequential design II                         | Matched Analysis II                   |
| Group sequential design III                        |                                       |

**ABOUT INSTRUCTOR**

Prof. Bhaswati Ganguli is a faculty member of the Department of Statistics at Calcutta University. Prof Ganguli received her Ph.D. in Biostatistics from Harvard University and her research interests include smoothing, mixed models and spatial data analysis. She is an author of the R package Semi Par and was the Principal Investigator for the e PG Pathshala project in Statistics of the MHRD.



**DR. MOGANTY R RAJESWARI**

Professor, Dept. Of Biochemistry, All India Institute Of Medical Sciences,  
New Delhi

<b>TYPE OF COURSE</b> : PG	<b>COURSE DURATION</b> : 15 weeks (14 <sup>th</sup> Aug, 2018 to 12 <sup>th</sup> Dec, 2018)
<b>INTENDED AUDIENCE</b> : M.Sc. in any of these subjects Biochemistry/Biotechnology/Life Sciences/Environmental Sciences / Med. Biochemistry/ Microbiology/B.Sc /Biophysics/Zoology/Bioinformatics etc.	<b>EXAM DATE</b> : 3rd January,2019
	<b>NO OF CREDITS</b> : 4
<b>PRE-REQUISITES</b> : Student eligibility- Interactions, working on assignments and basic educational qualification or prior knowledge required for doing the course- M.Sc. in any of these subjects Biochemistry/Biotechnology/Life Sciences/Environmental Sciences / Med. Biochemistry/ Microbiology/B.Sc /Biophysics/Zoology/Bioinformatics etc.	

**OBJECTIVE OF COURSE**

- This course On Biomolecules is one of the basic course for all PG students of Biological sciences.
- All PG 1st Year students or in their 1st semester need to do this course
- This course is designed in view of all PG Degree students of any Indian University.
- This will help in understanding of other courses (papers) that they will do in the subsequent semesters.

**LEARNING OUTCOME**

This course is essential and will help in understanding of other courses (papers) that they will do in the subsequent semesters.

**COURSE PLAN**

**Week 1** : Chemical bonds-covalent and non-covalent types of Bonds and Bond energies, Bond Angles etc, Water-The molecule of life, Aqueous Solution, Acids & Bases, Measurements of pH, Henderson Haselbatch equation, Titration Curve & pK values, Buffers

**Week 2** : Amino acids, chirality, peptide bond and polypeptides, Structural levels of proteins and Stabilizing forces, Conformational properties of polypeptides and Ramachandran plot

**Week 3** : Turns, loops, Super secondary structures, motifs and domains in proteins, Structures and function of Fibrous Proteins, Structure and function of Actin and myosins

**Week 4** : Hemoglobin, Myoglobin and Oxygen binding, Role of Protein Structure Health and Disease, Assessment 1

**Week 5** : Methods of Protein Separation and purification, Protein sequencing

**Week 6** : Methods of structure determination of proteins : X-ray, NMR, CD etc, Clinical Proteomics

**Week 7** : Protein Structure-based Drug Designing, Protein-Ligand (Small Molecules including drugs) interaction

**Week 8** : Components of Nucleic Acid, Conformational parameters of Nucleic acids and DNA double helix, DNA Double Helix and Polymorphism

**Week 9** : Circular and Supercoil DNA, Different types and structures of RNA

**Week 10** : Interactions of small molecules (ions, drugs ) with DNA, DNA Structure in health and disease

**Week 11** : DNA-Protein interactions, Assessment 2

**Week 12** : Introduction to Carbohydrates, Structures and conformations of polysaccharide cellulose, amylase, chitin, carbohydrate conjugates, Saturated and unsaturated fatty acids, Nomenclature of fatty acids and Essential and non-essential fatty acids

**Week 13** : Glycoproteins and proteoglycons, Classification of Lipids: simple and compound lipids, phospholipids, Cholesterol, Micelles and Liposomes: Applications in biology and medicine

**Week 14** : Lipids: extraction, separation and analysis, Components and architecture of Cell membrane, Various membrane models including Fluid-mosaic model

**Week 15** : Cholesterol and its role in health and disease, Overview of Biomolecules, their Structure & Function, Revision of the course, Final Assessment

**ABOUT INSTRUCTOR**

Dr. Moganty R Rajeswari, Professor, Dept. Of Biochemistry in All India Institute Of Medical Sciences New Delhi-110029. She has 27 years of teaching and 33 She was awarded the Post – Doctoral Fellowship by the French Government in “Molecular Biology” also awarded the French Govt. scholarship through Ministry of Education under the head “Molecular Biology” in 1984. Dr Rajeswari is a Expert Committee Member of University Grants Commission, for various XIth plan, committee etc.

She is the Member of Project Review committee of Neurology & Neurochemistry division, ICMR, New Delhi

She was Assistant Editor of the " Indian J. Clinical Biochem" 2000-2004. Review research papers which are submitted for publication in International journals----Journal of Molecular Structure, At Present she is the president of DNA Society.





### PROF. DR. SANJUKTA BHADURI

Dean (Research) and Professor, Department of Urban Planning,  
School of Planning and Architecture, Delhi

- TYPE OF COURSE** : PG **COURSE DURATION** : 15 weeks (14<sup>th</sup> Aug to 7<sup>th</sup> Dec 2018)
- INTENDED AUDIENCE** : Graduate from any discipline, post graduate students of any discipline, professional from any sector, academicians, researchers and policy/decision makers and anybody who is interested in the subject. **EXAM DATE** : 18th Dec 2018
- NO OF CREDITS** : 4
- PRE-REQUISITES** : Graduate from any discipline, post graduate students of any discipline, professional from any sector, academicians, researchers and policy/decision makers and anybody who is interested in the subject.

#### OBJECTIVE OF COURSE

The objective of the course is to impart knowledge related to planning of urban settlements. Considering the scale, typology hierarchy and the complexity pertaining to growth and development of Indian cities and the present inadequate capacity for planning the cities, this course would impart knowledge related to urbanization, city region linkages, planning history, theory, techniques of planning, concepts and approaches, processes, planning and development policies, types of plans, implementation of plans, projectization of these plans and case studies supplementing various aspects.



#### LEARNING OUTCOME

Upon Completion of this course, students will:

1. Understand the dichotomy between the urban and natural environment and resources
2. Understand the significance of city-region linkages and inter-dependence.
3. Understand the complex nature of issues, process specifically at metro and mega cities scale.
4. Understand how to develop indicators to measure various environmental, social and economic qualities of urban areas.
5. Be familiar with concepts such as climate change, green infrastructure, transit oriented development
6. Be familiar with approaches to human settlement planning
7. Be familiar with major urban policies and programmes at various levels and how they impact a city's development.
8. Be familiar with acts and legal tools relevant to city planning.
9. Be familiar with finance and management aspects of urban development.

#### COURSE PLAN

**Week 01:-** Definition and characteristics of Urban areas (Part I and II)

**Week 02:-** Implications of urbanization in India (Part I and II)

**Week 03:-** City in context of the Region (Part I and II)

**Week 04:-** Evolution of Cities (Part I, II and III)

**Week 05:-** Evolution of Cities (Part IV and V)

**Week 06:-** New towns, counter magnets and satellite towns (Part I,II and III)

**Week 07:-** Peri urbanization, Inner cities

**Week 08:-** History of town Planning (Part I and II)

**Week 09:-** Planning Theories and Models (Part I,II and III)

**Week 10:-** Planning Approaches and Techniques (Part I,II and III)

**Week 11:-** Hierarchy of Plans – Regional plan and Master plan (Part I,II and III)

**Week 12:-** Hierarchy of Plans – Zonal plan, local area plan and layout plan (Part I,II)

**Week 13:-** Planning legislation – Acts, Policies, Missions and Schemes

**Week 14:-** Management of urban development

**Week 15:-** Financing Urban Development in India (Part I and II)

#### ABOUT INSTRUCTOR

Prof. Dr. Sanjukta Bhaduri is a full time Professor of Urban Planning at SPA, New Delhi. She has done Bachelor in Architecture from Jadavpur University (1983), Masters in City Planning from I.I.T Kharagpur (1985) and Ph.D from SPA, New Delhi (2003). She has 33 years of professional, research and teaching experience in the fields of Urban Planning, Environmental Planning; the areas of special interest are Smart cities, Sustainable Development of settlements, Participatory Planning, Social aspects related to Planning Disaster Management, Urban Environmental Management, Assessment of Environmental Impacts, Energy and Urban Development, Environmental Quality of Human Settlements. She has worked in SPA, Delhi for 30 years in various positions.





### PROF. (DR.) HARPREET KAUR

Professor of Law,  
National Law University Delhi

**TYPE OF COURSE** : UG/PG/Diploma/Certificate

**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate

**COURSE DURATION** : 15 weeks (1<sup>st</sup> Aug to 31<sup>st</sup> Dec, 2018)

**EXAM DATE** : November/ December, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : For LL.M students, it will be mandatory to have Bachelors' degree in law. Other professionals should be enrolled in their professional courses and will be presumed to meet requirements of admission to their professional degrees. Other working professionals should have at least bachelors' degree in any discipline and must have Preliminary knowledge about business and business organisations and role of business in economic development of the country

#### OBJECTIVE OF COURSE

India has witnessed tremendous growth in the corporate sector in the last few decades. In view of this, it becomes important for students of law and commerce to understand the legal dynamics of the corporate sector. The course covers all important recent developments in this area. The course of Corporate Law has been specifically designed to provide not only an overview but also an in-depth knowledge about incorporation, raising capital by companies, borrowings and investments by companies, foreign direct investment in Indian companies, corporate restructuring, corporate insolvency and other related important issues.

#### LEARNING OUTCOME

- In-depth understanding about different business organisations and comprehend importance of company form of business organisation with its incorporation and administration
- Learning about raising of capital by companies in compliance with SEBI regulations
- Comprehension of corporate management and governance
- Learning legal aspects of accounts and audit of companies with role of auditors
- Understanding different restructuring methods for companies
- Understanding business rescue proceedings and compromises
- Knowledge about investigations and adjudicatory machinery of companies
- Knowledge about remedies available to shareholders and others
- Understanding corporate insolvency

#### COURSE PLAN

**Week 1-** Business organizations, Corporate personality and Registration of companies

**Week 2-** Companies: Kinds, meetings and other applicable laws

**Week 3-** Raising of Capital by companies

**Week 4-** SEBI- Issue of capital and Disclosure Requirements

**Week 5-** Borrowings and investments by companies

**Week 6-** Corporate Management and Governance: Part One

**Week 7-** Corporate Management and Governance: Part Two

**Week 8-** REVISION AND ASSIGNMENT WEEK ONE

**Week 9-** Accounts of companies

**Week 10-** Auditing of companies

**Week 11-** Business Rescue Proceedings and Compromises

**Week 12-** Investigations and Adjudicatory Machinery

**Week 13-** Remedies to shareholders and others

**Week 14-** Corporate Insolvency and Bankruptcy

**Week 15-** REVISION, ASSESSMENT and Evaluation

#### ABOUT INSTRUCTOR

Prof. (Dr.) Harpreet Kaur joined National Law University, Delhi in 2011. She is currently Professor of Law at NLU Delhi, as well as the faculty-in-charge for certificate and diploma courses on Competition Policy and Law. She teaches Corporate Law, Securities Regulations and Competition Law. She has 16 years of regular teaching experience in her specialisation in Commercial Laws.

She is a Fulbright Scholar in Residence and was selected for the International Visitor Leadership Programme on Competition Law sponsored by US State Government and visited USA for three weeks exchange programme in 2015. She has served as Indian Council for Cultural Relations Chair Professor of Indian Studies at Leibniz University, Hannover, Germany from Oct 2015 till April 2016. She is a visiting professor at Faculty of Law, University of Bergen, Norway.







**DR. ALKA CHADHA**

Astt. Prof., Dept. of Visual Art: Drawing & Painting, RG (PG) College, Meerut

**TYPE OF COURSE** : UG/PG

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (2<sup>nd</sup> July to 13<sup>th</sup> Oct, 2018)

**EXAM DATE** : 8<sup>th</sup> to 13<sup>th</sup> Oct. 2018

**NO OF CREDITS** : 4

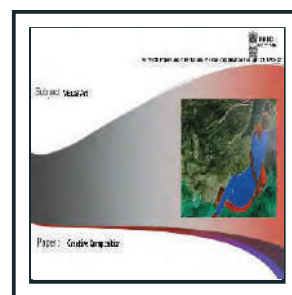
**PRE-REQUISITES** : Knowledge of Technical Theory of Composition and how to compose the creative composition by using the technical base like methods, process and styles in which a creative composition can be made.

**OBJECTIVE OF COURSE**

With this paper of Visual Arts learner will be able to utilize techniques of composition in a creative manner.

**LEARNING OUTCOME**

The learners will learn about the techniques of composition and visual elements of art and how they contribute in making a painting more appealing. The learner will also learn how to compose the good composition. Further on, the modules include technical base like methods, process and styles in which a creative composition can be made. Learning to express and communicate, one can experiment using various styles like 2D, 3D, realistic, traditional, cubistic, expressionistic, surrealist, decorative, constructive, minimal approach, symbolic, thumb nail, illustrative, idealistic, free and then sketching.



**COURSE PLAN**

**Week 01:-** 1. Meaning and Technical Theory of Composition Rule of Thirds, 2. Focal Points in Composition, 3. Rule of Line in Composition

**Week 02:-** 4. Rule of Space in Composition, 5. Rule of Form, Shape in Composition, 6. Importance of Colors in Composition

**Week 03:-** 7. Rule of Harmony in Composition, 8. Rule of Rhythms in Composition, 9. Rule of Textures in Composition

**Week 04:-** 10. Rule of Contrast, 11. Balance in Composition, 12. Movement in Composition

**Week 05:-** 13. Rule of Odds in Composition, 14. Importance of subject, idea and feeling in painting, 15. Importance of imagination expression in Composition

**Week 06:-** 16. Role of Medium, Method, Process, Technique and Style in Composition, 17. Expression and Communication Using the Visual Arts

**Week 07 :-** Assignment Week

**Week 08:-** 18. 2-dimensional composition, 19. 3-dimensional composition, 20. Traditional Composition

**Week 09:-** 21. Realistic Composition, Part 1, 22. Realistic Composition, Part 2, 23. Cubistic composition

**Week 10:-** 24. Expressionistic Composition, 25. Surrealistic composition, 26. Decorative composition

**Week 11:-** 27. Constructive Composition, 28. Minimal composition, 29. Symbolic Composition

**Week 12:-** 30. Thumbnail Composition, 31. Illustrative Composition

**Week 13:-** 32. Idealistic Composition, part 1, 33. Idealistic Composition, part 2

**Week 14:-** 34. Free and Creative Composition, 35. Outdoor Sketching

**Week 15 :-** Final Exam

**ABOUT INSTRUCTOR**

Dr Alka Chadha has been working as Astt Prof in Dept of Visual Art, RG College, Meerut since the year 2001 after being appointed by Higher Education, Allahabad. She did Ph.D -2004 from Faculty of Visual Arts, B.H.U., Varanasi; UGC (NET) 1998; M.F.A. (Painting) 1995-97, B.F.A. (Painting). She had to her credit many awards. She also bagged a Certificate of Excellence, International magazine- Startists: Contemporary women in art, 2017

Dr Alka has been the Guest Faculty for 40 lectures, under MHRD E-learning project from 26th-28th March and 27th-31st August, 2011, and also the Content writer for E-pathshala MHRD project DEI Deemed Univ, Dayalbagh, Agra 2015, 2016, 2017; Guest lectures in many reputed Institutes, Invitee artist, and has written Reviews in catalogues of exhibitions of many renowned artists.

She has participated in many All-India, Regional and State level exhibitions. Dr Alka has held one two-man show and almost thirty group shows in India and abroad. Her collections are with many National & International collectors. She has attended twenty three Workshop; twenty six National and International seminars and four Conferences; and presented twenty three papers. Her Fifty four papers have been published in many seminars and reputed journals and books. She is the Editor of reputed National and International Journals.





**NEERAJ TIWARI**  
Assistant Professor  
National Law University Delhi

**TYPE OF COURSE** : UG/PG/Certificate

**INTENDED AUDIENCE** : UG/PG/Certificate

**COURSE DURATION** : 15 weeks (1<sup>st</sup> Aug to 31<sup>st</sup> Dec 2018)

**EXAM DATE** : In the month of December

**NO OF CREDITS** : 4

**PRE-REQUISITES** : This course is beneficial for LL.B. and LL.M. students. Though other professionals who are familiar with the following concepts may also take up this Course:  
**Basic understanding of the normative structure of the Indian Criminal Justice System**  
**Preliminary knowledge about agencies of Criminal Justice System**  
**Basic understanding of provisions of Code of Criminal Procedure and Part III of the Indian Constitution**

### OBJECTIVE OF COURSE

The object of the course is to make the learners well versed with the Indian criminal justice system. To achieve this, the modules may be divided in to three categories- first, the modules which deal with functionaries of criminal justice system, second the modules which detail the pre-trial, trial and post trial processes and third the modules which raise voice and concern of other stakeholders like accused, victim and witnesses.

### LEARNING OUTCOME

After completing the MOOC course, the student shall be able:

- To have a comprehensive understanding of the substantive and procedural issues which are shaped by the constitutional guarantees.
- To understand the roles of various functionaries in Criminal Justice System.
- To understand the procedural ramifications involved in investigation and other preliminary processes.
- To have the fundamental knowledge and understanding relating to cognizance, charge and trial process under the Code of Criminal Procedure.
- To expose about the process of sentencing and alternate modes of punishment.
- To have a fair idea about the correctional system within the realm of the criminal justice administration

### COURSE PLAN

**Week 01:-** Foundations of Criminal Justice System : Modules 1, 2 and 3

**Week 2 :-** Functionaries of Criminal Justice Administration : Modules 4 and 5

**Week 3:-** Crime Reporting, Arrest and Investigation: Modules 6 , 7 and 8

**Week 4:-** Search & Seizure and Processes to Procure attendance of persons and documents: Modules 9 and 10

**Week 5:-** Pre Trial Process & Role of Courts, Access to Justice and Remand Procedure: Modules 11, 12 and 13

**Week 6:-** Rights of Arrestee, Procedural Safeguards to Rape Victims and Custodial Justice: Modules 14, 15 and 16

**Week 7:-** Principles of Fair Trial and Trial Process- Cognizance and Framing of Charge:

Modules 17 and 18

**Week 8:-** REVISION AND ASSIGNMENT WEEK ONE TO SEVEN

**Week 9:-** Initiation of Proceedings before Magistrate, Bail Jurisprudence: Modules 19 and 20

**Week 10:-** Trial Process- Place of Inquiry and Trial, Kinds of Trial and Appreciation of Evidence: Modules 21, 22 and 23

**Week 11:-** Compounding of Offences, Plea Bargaining and Probation: Modules 24, 25 and 26

**Week 12:-** Principles of Sentencing, Remission and Commutation of Sentence: Modules 27 and 28

**Week 13:-** Appeals, Revision and Correctional System: Modules 29, 30 and 31

**Week 14:-** Victims of Crime, Witness Protection, Maintenance Proceeding and Inherent Jurisdiction of High Courts: Modules 32, 33, 34 and 35

**Week 15:-** REVISION AND ASSIGNMENT WEEK NINE TO FOURTEEN

### ABOUT INSTRUCTOR

Neeraj Tiwari is Assistant Professor of Law and Member of Centre for Criminology and Victimology at National Law University, Delhi. He specializes in Criminal law. He is pursuing his academic and research interest in Criminal Law and Criminal Justice Administration. Before joining NLU, Delhi Neeraj has served as a faculty at National Judicial Academy, India. Neeraj has published several papers in national and international journals primarily focusing on issues relating to criminal justice administration. Presently he is pursuing his doctorate research on Role of Magistracy in Criminal Justice Administration from NLU Delhi.





## PROF. DEVENDRA KUMAR CHOUBEY

Professor, Centre of Indian Languages, JNU,  
New Delhi

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (21<sup>st</sup> Aug to 04<sup>th</sup> Dec, 2018)

**EXAM DATE** : As per UGC decision

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduate

### OBJECTIVE OF COURSE

- दलित साहित्य के वैचारिक आधार को समझने का प्रयास किया जाएगा,
- दलित साहित्य की सैद्धांतिकी पर चर्चा की जाएगी,
- हिन्दी दलित साहित्य पर मराठी दलित साहित्य का प्रभाव देखने का प्रयास किया जाएगा,
- पहली दलित रचनाकार हीराडोम से अबतक की प्रमुख रचनाओं के वैशिष्ट्य पर चर्चा की जाएगी,
- इन सबके साथ आप आदिवासी साहित्य की परम्परा, सैद्धांतिकी एवं प्रमुख रचनाओं के सन्दर्भ में भी चर्चा की जाएगी।

### LEARNING OUTCOME

- दलित साहित्य की अवधारणा, दलित साहित्य का स्वरूप, दलित साहित्य परंपरा से परिचित होंगे।
- दलित साहित्य का वैचारिक आधार, दलित साहित्य के अध्ययन की समस्याएं, दलित साहित्य और वैश्वीकरण, दलित साहित्य की भाषा, स्वानुभूति और सहानुभूति, दलित साहित्य और आदिवासी साहित्य का संबंध, आदिवासी साहित्य की प्रवृत्तियाँ और परंपरा सरहपा समझ सकेंगे।
- प्रमुख दलित एवं आदिवासी रचनाकार के रचनाओं के माध्यम से दलित एवं आदिवासी साहित्य की दिशा समझने में सक्षम हो सकेंगे।



### COURSE PLAN

#### Week 1

Dalit Sahitya Ki Avdharana, Dalit Sahitya Ka Swaroop

#### Week 2

Dalit Sahitya Ki Parampara 1, Dalit Sahitya Ki Parampara 2, Dalit Sahitya Ki Parampara 3

#### Week 3

Dalit Sahitya Ki Bhasha, Swanubhuti Aur Sahanubhuti, Dalit Sahitya Ke Adhyann Ki Samasyayen

#### Week 4

Dali Sahitya Ka Vaicharik Adhar (Mahatma Jyotibha Fule), Dali Sahitya Ka Vaicharik Adhar (Dr.Bhimrao Ambedakar)

#### Week 5

Hindi Dalit Sahitya Par Marathi Dalit Sahitya Ka Prabhaw, Dalit Andolan Ka Itihas

#### Week 6

Dalit Stree Chintan, Dalit Sahitya Aur Vaishvikaran

#### Week 7

Dalit Kahaniyan, Dalit Kavita, Dalit Alochna

#### Week 8

Sarahapa 1, Sarahapa 2, Ravidas 1, Ravidas 2

#### Week 9

Dadudayal : Jivan Aur Sahitya, Hira Dom Aur Achhutanand

#### Week 10

Juthan Ka Alochnatmak, Adhyan, Akkarmashi, Murdaiya

#### Week 11

Aaj Bajar Band hai, Salam, Fulva Aur upmahadveep

#### Week 12

Sajish, Chappar, Dohra Abhishap

#### Week 13

Mera Bachpan Mere Kandhon Par, Shikanje Ka Dard

#### Week 14

Dalit Sahitya Aur aadivasi Sahitya Ka Antah Sambandh, Aadivasi Sahitya Ki Pravritiyan, Aadivasi Sahitya Ki Parampra

#### Week 15

Global ganv Ke Devta, Nirmala Putul Ki Kavitayen, Adiwasi Kahaniyan

### ABOUT INSTRUCTOR

Devendra Kumar Choubey, working with Centre of Indian Languages, JNU, New Delhi, on the post of permanent Professor, having 20 years teaching experience in the University Education. Mobile Number 9868272999

E-mail ID [cdevendra@gmail.com](mailto:cdevendra@gmail.com)



**BHASWATI GANGULI**

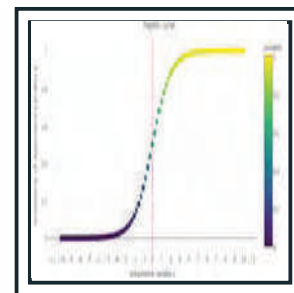
Professor, Department of Statistics, University of Calcutta

**TYPE OF COURSE** : PG**INTENDED AUDIENCE** : PG**COURSE DURATION** : 14 weeks (13/8/2018 - 16/11/2018)**EXAM DATE** : 20/11/2018**NO OF CREDITS** : 4**PRE-REQUISITES** : Basic knowledge of regression**OBJECTIVE OF COURSE**

The purpose of the course is to familiarise students with the tools and methods required for discrete data analysis. An introduction to the need for special methods is provided for the case when the outcome of a regression model is discrete rather than continuous. Methods for tabular representation and summarisation for such data are provided and the different types of discrete data such as ordinal, nominal etc are introduced. The latter part of the course focuses on GLMs with logistic and count data being the focus. The course is supplemented by examples using R.

**LEARNING OUTCOME**

Tools and methods for discrete data analysis and their implementation in R.

**COURSE PLAN**

Introduction to categorical data

Types of Data

Prospective and Retrospective Studies

The analysis of 2x2 table

Ordinal data I Ordinal Data II

Relative Risk and Relative Difference

Odds Ratio

Simpson's Paradox

The Binary Choice model

Logit and probit model

How to summarise categorical data in R

The O Rings dataset

Introduction to GLM

Components of GLM

Likelihood based inference I IRLS equations

Inference for the logistic model

Residual Analysis for a GLM

Goodness of fit The glm function in R

**MID TERM ASSESSMENT**

Grouped and ungrouped binary data

Sparseness Regression models for count data -I

Regression models for count data -II

Case Study: Analysis of the gala dataset of the faraway library in R

Zero Inflated Poisson models

Quasi likelihood

The quasi Poisson model

Polytomous regression 1

Polytomous regression 2

Polytomous regression 3

Models with constant Coefficient of Variation

Linear Mixed Model

Longitudinal Data Analysis in R

Subject specific models for longitudinal data

Conditional and Marginal Likelihood

GAMs

**ABOUT INSTRUCTOR**

Prof. Bhaswati Ganguli is a faculty member of the Department of Statistics at Calcutta University. Prof. Ganguli received her Ph.D. in Biostatistics from Harvard University and her research interests include smoothing, mixed models and spatial data analysis. She is an author of the R package SemiPar and was the Principal Investigator for the e PG Pathshala project in Statistics of the MHRD.





**DR. RAHUL BHATTACHARYA**  
Assistant Professor in Statistics, Department of Statistics,  
University of Calcutta

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 14 weeks (13/08/2018 to 16/11/2018)

**EXAM DATE** : TBA

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Honours or Major in Statistics, Operations Research, B. Stat, B. Tech

### OBJECTIVE OF COURSE

The course on Distribution free methods aims to give an exposure on distribution free methods in statistics starting from a very basic level. The course is logically divided into two halves- one explaining large sample methods and the other nonparametric methods. It presents the concepts, methodologies and applications in real fields in a unique way. The course is designed and developed with the aid of a number of theoretical and practical examples and develops insights in students through the self-assessment exercises.

### LEARNING OUTCOME

The course is developed considering the needs of Post graduate students of statistics. After course completion, the students are primarily expected to identify the situations, where these procedures can be applied. However, from a larger perspectives, the course will develop interest among the students for further study and help them to prepare for advanced studies and competitive examinations like ISS, NET etc.

### COURSE PLAN

**Week 01:-** Basics of nonparametric inference

**Week 02:-** U statistic with properties

**Week 03:-** Sign Test

**Week 04:-** Signed rank Test

**Week 05:-** Two sample tests

**Week 06:-** Goodness, Association and Homogeneity problems

**Week 07:-** Midterm week

**Week 08:-** Mathematical Prerequisites for large sample-I

**Week 09:-** Mathematical Prerequisites for large sample-II

**Week 10:-** Mathematical Prerequisites for large sample-III

**Week 11:-** Stochastic Convergence

**Week 12:-** Delta Theorems and applications

**Week 13:-** Asymptotic distributions and applications in inference

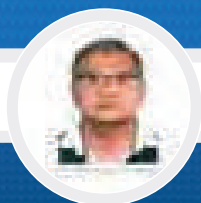
**Week 14:-** Asymptotic Optimality

**Week 15 :-** Final Examination

### ABOUT INSTRUCTOR

Dr. Rahul Bhattacharya is currently an Assistant Professor in the Department of Statistics, University of Calcutta. Dr. Bhattacharya was a student of Presidency College, Kolkata with honors in Statistics, graduated from Calcutta University and thereafter obtained his Ph.D (Sc.) degree from the same institution. He has more than a decade long experience in teaching at both undergraduate and post graduate levels in topics like, Statistical inference (parametric & nonparametric), Large sample theory, Probability theory and Real Analysis. However, his research interest is Biostatistics and related inference and he has been awarded the prestigious J.B. Haldane Memorial Prize from Indian Statistical Institute for outstanding research work done on his field. He has to his credit more than forty research articles on various fields of statistics.





### SUGATA SEN ROY

Professor, Department of Statistics,  
University of Calcutta

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 15 weeks (13/8/2018 to 16/11/2018)

**EXAM DATE** : 20/11/2018

**NO OF CREDITS** : 4

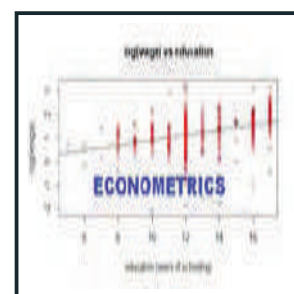
**PRE-REQUISITES** : Ideas of basic statistical methods.

#### OBJECTIVE OF COURSE

The objective is to introduce the students to the idea of Econometrics, which primarily is a synthesis of Statistics and Economic Methods. First, an introduction to the classical regression model is made. Since most of the assumptions for these models do not hold for economics data, methods for tackling the violations are then discussed. Finally, extensions are made to several interdependent regression equations.

#### LEARNING OUTCOME

The student would be versed in the standard econometric techniques. This includes methods for choosing a proper model; ways of handling violations of classical assumptions like heteroscedasticity, autocorrelation and multicollinearity; tackling interdependent variables in regression models through simultaneous equations systems, etc.. At the end of the course, the student will have enough perspective to do meaningful analysis of economic data.



#### COURSE PLAN

**Week 01:** Introduction to regression model

**Week 02:** Regression with categorical regressors

**Week 03:** Detection of Outliers

**Week 04:** Model selection techniques

**Week 05:** Problem of Heteroscedasticity

**Week 06:** Problem of Autocorrelation

**Week 07:** Problem of Multicollinearity

**Week 08:** Mid-term Assessment

**Week 09:** Censored response Variables

**Week 10:** Measurement Error Models

**Week 11:** Lagged Variable Models

**Week 12:** Simultaneous Equations Models

**Week 13:** Simultaneous Equations Models

**Week 14:** Simultaneous Equations Models

**Week 15 :** Final assessment

#### ABOUT INSTRUCTOR

Did graduation in Statistics (Hons) from Presidency College, Calcutta. Stood first in the post graduate examination in Statistics at University of Calcutta. Did Ph.D. in Statistics from University of Calcutta in the area of Time Series Analysis. Have been teaching at the University of Calcutta since 1989. Primary teaching and research interests are in Time Series Analysis, Regression Analysis, Econometrics, Development Statistics, Survival Analysis, Applied Multivariate Analysis and Functional Data Analysis.



**DR. BHARTI KUMAR**Associate Professor at National Law University,  
Delhi**TYPE OF COURSE** : UG/PG/Diploma/Certificate**INTENDED AUDIENCE** : UG/PG**COURSE DURATION** : 01/08/2018 to 31/12/2018**EXAM DATE** : As scheduled by SWAYAM**NO OF CREDITS** : 4**OBJECTIVE OF COURSE**

The indelible impact of environment on the lives of people is overwhelming. The current scenario is particularly compounded by multitudinal issues as rampant air and water pollutions, climate change, loss of biodiversity and the like that has contributed to immense problems of environment and health care as well as raised the inevitable question of survival of life itself on earth. Apart from an overview of the vast subject matter, a substantive understanding in the gradual evolution of pertinent themes in environment shall be imparted so that the student is not only conversant with the overall framework of environmental law but also becomes acquainted with fundamental concepts of basic themes. The basic objective is to familiarize the concept and scope of environmental law and also of its particular dominant issues so as to become a value addition in learning and to ignite academic/research interest, eventually.

**LEARNING OUTCOME**

- Learning about the significance of law and the fundamental principles that have emerged developments in international environmental.
- Exposition about the human right to environment and constitutional framework governing environment in select countries, including India.
- Comprehending the statutory and regulatory mechanisms pertaining to environment in India.
- Understanding judicial response to environmental issues in India.

**COURSE PLAN****Week 1-** a) Introduction of international environmental law, b) Principles of Environmental Law**Week 2-** a) Human rights to environment and constitution of the world, b) Sources of Environmental Law**Week 3 and 4-** a) Law relating to Water pollution, b) Regulation of wetlands, c) Dams and the environment, d) Coastal regulation laws in India, e) High seas and outer space**Week 5 and 6-** a) Law relating to Air pollution, b) Ozone depletion, c) Climate change law, d) Financial mechanisms and technology transfer, e) Energy laws**Week 7 and 8-** a) Law relating to Waste management, b) Law relating to Plastic and bio- medical waste management, c) Industrial disasters and the environment, d) Disaster management and environment, e) Chemicals and impact on environment**Week 9-** a) Regulation of Mining sector in India, b) Forest conservation laws in India, c) Wildlife protection, d) Environment crimes**Week 10-** a) Biodiversity, b) Access and benefit sharing, c) Bio safety and legal issues**Week 11-** a) Environment Impact Assessment, b) Procedural environmental rights, c) Role of NGO in environmental protection**Week 12-** a) Judicial remedies in environmental cases b) Responsibility and Liability for environmental harm**Week 13 and 14-** a) Nuclear energy and law, b) Armed conflict and the environment, c) International law and the Protection of the Antarctica and the Arctic, d) Regional environmental co-operative framework, e) International environment institutions**ABOUT INSTRUCTOR**

Dr. Bharti is presently Associate Professor at National Law University, Delhi which she joined in 2009. Prior to that, she was teaching at Faculty of Law, Delhi University between 1998-2009. Her areas of interest and specialization are Environmental Laws, Human Rights, Humanitarian and Refugee Law, Constitutional Law, Laws relating to women, Alternative Dispute Resolution etc. She has been Visiting faculty at Bureau of Parliamentary Studies and Training, Institute of Constitutional and Parliamentary Studies, Indian Law Institute etc. Various paper presentations on different themes have been presented by her at several Conferences including SAARC Law Bhutan and GAJE at Turkey. She has been a part of Law Commission's Panel on Early Childhood Development as well as NCPDR's Panel on Education, Child Marriage etc. She is also part of Ministry of Women and Child Development's Panel to review institutional mechanisms related to delay in grant of maintenance to women. The International Environmental Conferences held by NGT in the past 3 years have seen the active participation by her in the organization and publication of its proceedings. She is Director, Centre for Environmental Law, Policy and Research at NLU, Delhi. She has coordinated various workshops and seminars. She is also involved in Legal Aid activities including mediation clinics as well as imparting clinical legal education at NLU Delhi.



**DR TEJPAL DHEWA**

Assistant Professor, Central University of Haryana,  
Mahendergarh, Haryana

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 15 weeks (21/08/2018 to 20/12/2018)

**EXAM DATE** : 20/12/2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduation in science

**OBJECTIVE OF COURSE**

The major learning objectives of this course will be to study:

- The scope of food microbiology and food safety.
- To obtain the knowledge about important genera of microorganisms associated with food and their characteristics.
- To learn various techniques for enumeration and control of microorganisms in food
- To gain the essential knowledge and applications of various techniques (traditional to advanced) for preserving food.
- To understand the role of different microorganisms in food spoilage, food fermentation and foodborne diseases.
- To comprehend the microbiological quality control and foodborne illnesses investigation procedures for ensuring food safety and hygiene.
- To understand current national and international food safety rules and regulations.
- To know the requirements and components of food safety management system (FSMS) and use of microbiological risk assessment (MRA) tools for assessing microbiological risks in food sector.

**LEARNING OUTCOME**

After completion of this course, the learners will acquire the knowledge about:

- The scope of food microbiology and food safety.
- Important genera of microorganisms associated with food and their characteristics.
- Various techniques for enumeration and control of microorganisms in food
- Numerous techniques (traditional to advanced) for preserving food.
- The role of different microorganisms in food spoilage, food fermentation and foodborne diseases.
- The microbiological quality control and foodborne illnesses investigation procedures for ensuring food safety and hygiene.
- National and international food safety rules and regulations.
- The requirements and components of food safety management system (FSMS) and use of microbiological risk assessment (MRA) tools for assessing microbiological risks in food sector.

**COURSE PLAN**

**Week 01** : 1. Introduction to food microbiology and food safety, 2. Microflora of Food, 3. Intrinsic factors affecting microbial growth and survival in food  
Discussion forum

**Week 02** : 4. Extrinsic factors affecting microbial growth and survival in food, 5. Microbiological examination of food, 6. Advances in isolation and enumeration of microorganisms in food

**Week 03** : 7. Principles of food preservation and significance, 8. Preservation of food by physical methods – low and high temperature, 9. Preservation of food by physical methods – radiation

**Week 04** : 10. Preservation of food by chemical methods, 11. Biopreservation of food, Assignment-I

**Week 05** : 12. Modified environment for storage of food, 13. Microorganisms as food, 14. Lactic fermentation in food

**Week 06** : 15. Yeast-lactic fermentation in food, 16. Mold-lactic fermentation in food, 17. Starter cultures for food fermentation, Discussion forum

**Week 07** : 18. Fermented milk, 19. Fermented milk products, 20. Fermented juice, vegetables and other beverages

**Week 08** : 21. Fermented meat, 22. Fermented fish products, Assignment-II

**Week 09** : 15. Introduction to food spoilage, 16. Spoilage of fruits, vegetables, and their products, 17. Spoilage of dairy products

**Week 10** : 18. Spoilage of canned food, 19. Spoilage of bakery and egg products, 20. Spoilage of meat, fish, and sea food, Discussion forum

**Week 11** : 21. Newer methods for controlling spoilage of food, 22. Predictive modelling for food spoilage, Assignment -III

**Week-12** : 23. Food borne outbreaks- Bacterial agents for foodborne illnesses, 24. Fungal and algal agents for foodborne illnesses, 25. Foodborne animal parasites

**Week 13** : 26. Investigation of foodborne illness outbreaks, 27. Indicators of food microbial quality and safety, 28. Application of hurdle technology in food industry

**Week 14** : 29. Principles of hygiene and sanitation in food service establishment, 30. Food safety laws: National and international, 31. Food safety and quality management system

**Week 15** : 32. Principles and guidelines for conducting microbiological risk of food, Revision of the course, Discussion forum, Final assessment/Term-end examination

**ABOUT INSTRUCTOR**

Dr. Tejpal Dhewa is an Assistant Professor at Central University of Haryana. He is also serving as a UGC-SWAYAM Coordinator and Coordinator-Food Safety Training and Certification (FoSTaC) Centre-CUH, Food Safety and Standards Authority of India (FSSAI). He has a diverse industrial, teaching, and research experience. He has successfully completed DU innovation project (2013-2015). Recently, Dr. Dhewa granted an ECR project as Principal Investigator by Science and Engineering Research Board, Department of Science and Technology, Govt. of India. Besides, he is a course coordinator of two GIAN courses [Food Safety, Food Security, and Food Regulations: A primer, Course Code: 174040H04; and Metabolomics in food and nutrition science, Course Code: 174040H06] sponsored by MHRD, Government of India.





**PROF. SHAMBHUNATH TIWARI**

Professor, Hindi Depatt. AMU, Aligarh

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (22<sup>nd</sup> Aug to 05<sup>th</sup> Dec, 2018)  
**EXAM DATE** : NA  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduation in any discipline having working Knowledge for M.A. level language & literature learning of Hindi.

**OBJECTIVE OF COURSE**

- विद्यार्थी न केवल हिंदी साहित्य के इतिहास से समग्रता के साथ परिचित हो सकेंगे, बल्कि हिंदी साहित्य के विविध पक्षों से जुड़े अनेक विवाद एवं मुद्दों पर भी निष्पक्ष एवं तर्कपूर्ण ढंग से विचार कर पाने में समर्थ हो सकेंगे।
- विद्यार्थियों की आवश्यकताओं और अपेक्षाओं के अनुरूप विषय के साथ पूर्ण न्याय हो सके और उन्हें हिंदी साहित्य के इतिहासविषयक अधुनातन शोधपरक सामग्री से पूरी तरह परिचित करवाया जा सके।

**LEARNING OUTCOME**

'हिंदी साहित्य का इतिहास' पाठ्यक्रम में 'विद्यार्थियों को हिंदी साहित्य के संपूर्ण इतिहास से परिचित करवाना होता है, क्योंकि बिना साहित्य-इतिहास को समझे भाषा और साहित्य के सर्जनात्मक विकास को समझना कठिन होगा। साहित्य के इतिहास को हम इसलिए नहीं पढ़ते हैं कि उसमें अतीत की अनेक तिथियों, घटनाओं के साथ कवियों और उनकी रचनाओं के नाम जान लें, बल्कि उसका अध्ययन इसलिए आवश्यक है कि विभिन्न कालखंडों में अवस्थित कवियों के काव्यात्मक वैशिष्ट्य के साथ उनके द्वारा रचित साहित्य की विकासधारा को हम भलीभाँति समझ सकें।

**COURSE PLAN**

**Week 1:** Hindi Sahitya Ke Itihas Ki Rooprekha, Hindi Sahitya Ki Prishbhumi

**Week 2:** Aadikaal Ki Pramukh Pravrityan, Raso Sahitya Ki Parampra, Bhakti Ka Uday Or Vikas

**Week 3:** Krishanbhakti Kavyadhara, Rambhakti Kavyadhara, Gyanashrayi Kavyadhara, Premasharayi Kavyadhara

**Week 4:** Ritikaleen Kavya Ke Prernastrot, Riti Ka swaroop Evam Ritikaal Ki Paristhitiyan Week 5 Ritibaddh Kavya, Ritisiddh Kavya, Ritimukt Kavya

**Week 6:** Sahitya Bhasha Ke Roop Main Brijbhasha Ka Vikas, Sahitya Bhasha Ke Roop Main Avdhi Ka Vikas

**Week 7:** Sahitya Bhasha Ke Roop Main Khdi Boli Ka Vikas, Hindi Sahitya Ke Itihas Lekhan Main Hindi Aur Urdu Ka sambandh

**Week 8:** Hindi Sahitya Main Adhunikata Ka Uday, Bhartenduyug, Dwivediyug

**Week 9:** Chhayawaad, Chhayawadottar Kavya Ki Vibhinna dharayen

**Week 10:** Pragatisheel Hindi Kavya dhara, Prayogwad, Samkaleen Hindi Kavita

**Week 11:** Hindi Upanyas Ka Vikas, Hindi Kahani Ka Vikas, Hindi Nibandh Ka Vikas

**Week 12:** Hindi Natak Ka Vikas, Hindi Alochna Ka Vikas

**Week 13:** Hindittar Bhartiya Bhashayen Or Hindi Sahitya, Hindi Ka Pratibimbit Sahitya Aur Hindi Sahitya Ka Itihas, Hindi Sahitya Ke Itihas Main Prampra Aur Pragati Ka sambandh

**Week 14:** Hindi Sahitya Ke Itihas Lekhan Main Kaal Vibhajan Ka Aadhar, Hindi Sahitya Ke Vibhinna Kalon Par Punarvichar Ki jarurat, Hindi Sahitya Ke Naye Itihas Lekhan Ki jarurat Aur sambhavna

**Week 15:** Prawasi Sahitya Aur Hindi Sahitya Ka Itihas, Hindi Sahitya Ki samridhi Mein Anuwad Ki Bhumika, Adhunik Hindi Sahitya Ke Vikas Mein Patra-Patrikaon Ki Bhumika

**ABOUT INSTRUCTOR**

Shambhunath Tiwari, a Professor(Hindi) in AMU ALIGARH. M.A.from JMI, NewDelhi, M.Phil., Ph.D. with J.R.F. from J.N.U.New Delhi. Having 24years of P.G. teaching experience he is actively engage in teaching and research.His main focus area is history of Hindi Literature, comparative study and modern poetry. Four books have been published in his credit.He received many awards including rajasthan sahitya academy award(2010), Hindi Academy Award(1988). He has been a member of Rajasthan Urdu Academy (2007-10). Many programs have been telecast through Doordarshan, Jaipur.

**FOREIGN VISIT**

Prof.Shambhunath has visited Australia for two months (July-August 2016 ) as Academic and cultural purposes and delivered many lectures.





### DR. SHIVSHANKAR MISHRA

Associate Professor & HOD, Research & Publication,  
SLBSRS Vidyapeetha, New Delhi-16

**TYPE OF COURSE :** PG/ACHARYA

**INTENDED AUDIENCE :** PG

**COURSE DURATION :** 15 weeks (01/08/2018 to 31/12/2018)

**EXAM DATE :** 04/01/2019

**NO OF CREDITS :** 6

**PRE-REQUISITES :** संस्कृत भाषा का ज्ञान, परास्नातक (एम.ए./आचार्य) पाठ्यक्रम में जो किसी विश्वविद्यालय अथवा महाविद्यालय में पंजीकृत हैं। यह पाठ्यक्रम संस्कृत के जिज्ञासुओं के साथ इतिहास, दर्शन, समाजशास्त्र आदि विषय के अभ्यर्थियों के लिए भी विशेष लाभदायक सिद्ध होगा।

#### OBJECTIVE OF COURSE

1. भारतीय संस्कृति का समग्र परिचय।
2. भारतीय संस्कृति की पुरातनता एवं ऐतिहासिकता का सम्यक् बोध।
3. प्राचीन-मध्यकालीन एवं आधुनिक भारत का इतिवृत्त ज्ञान।
4. इतिहास के विषय में भारतीय अवधारणा का परिचय।
5. पुराणों में भारतीय इतिहास की अवधारणा।
6. भारतीय धार्मिक परम्परा एवं संस्कृति के मूलतत्त्वों का निरूपण।
7. भारतीयदर्शन का संक्षिप्त परिचय।
8. संस्कृतवाङ्मय का संक्षिप्त परिचय।
9. पालि-प्राकृत-अपभ्रंश वाङ्मय का सम्यक् ज्ञान।
10. भारतीय कलाओं का परिचय, उनकी दार्शनिक एवं सामाजिक पृष्ठभूमि का परिज्ञान।
11. भारत के सांस्कृतिक इतिहास का परिज्ञान।



#### LEARNING OUTCOME

इस पाठ्यक्रम के अध्ययन से छात्रों को भारतीय संस्कृति एवं भारतीय इतिहास के मूलभूत तत्त्वों का ज्ञान हो सकेगा। संस्कृत वाङ्मय के ग्रन्थों के आधार पर भारत की संस्कृति एवं भारत के इतिहास को भारतीय चिंतन की दृष्टि से समझने की दिशा में एक नवीन दृष्टि प्राप्त हो सकेगी।

#### COURSE PLAN

Week 1 : प्राचीनभारतीयइतिहास: प्रथमभाग: (Ancient Indian History - Part One)– 01, प्राचीनभारतीयइतिहास: द्वितीयभाग: (Ancient Indian History - Part Two)– 02, मध्यकालीनभारतम् (Medieval Indian History)– 03

Week 2 : आधुनिकभारतस्य इतिहास: (Modern Indian History)- 04, इतिहासस्य भारतीय अवधारणा परम्परा च (Indian ideas of history and its tradition)– 5, पुराणेषु भारतीय इतिहास: (Indian history of puranas)– 6

Week 3 : ऐतिहासिकमहाकाव्यानि 1000-1599 ई (Historical epics 1000-1599 A.D.) – 7], ऐतिहासिकमहाकाव्यानि 1600-2000 ई (Historical epics 1000-1599 A.D.) – 8, भारतीयपरम्परा तत्र धर्मा:- 09

Week 4 : धर्मपरम्परायां निहितानि तत्त्वानि- 10, धार्मिकपरम्परायां योजकानि तत्त्वानि- 11, धार्मिकपरम्परायाम् आहिककर्म- 12

Week 5 : सांख्यदर्शनस्य सामान्यपरिचय:- 13, योगदर्शनस्य सामान्यपरिचय:- 14, वल्लभवेदान्तस्य दार्शनिकपरिचय:- (Philosophical introduction to Vallabha Vedanta)-15

Week 6 : शैवविशिष्टद्वैतसिद्धान्तस्य सामान्यपरिचय:- 16 (Introduction to Shaiva Vishistadwaita Vedanta)-16, चार्वाकदर्शनम् (Philosophy of charvaka – 17, बौद्धदर्शने प्रथमः पाठः (First lesson on the philosophy of Budha)–18

Week 7 : बौद्धदर्शने द्वितीयः पाठः (Second lesson on the philosophy of Budha)– 19, जैनदर्शनम् (Philosophy of jaina)- 20, कलाया दार्शनिकी पृष्ठभूमिः ( Philosophical background of Art)- 21

Week 8 : Assignment 1

#### ABOUT INSTRUCTOR

Associate Professor & HOD, Research & Publication, SLBSRS Vidyapeetha, New Delhi-16  
Post Graduate Teaching/Research Experience: 20 Years  
Email : ssmishralbs@gmail.com  
Mob. 9411171081, 9456328499

Week 9 : कलायाः सामाजिकी पृष्ठभूमिः (Social background of Art)- 22, भारतीय संगीतकला( Indian musical art)- 23, भारतीय नृत्यकला( Indian art of dancing)- 24

Week 10 : भारतीयनाट्यकला( Indian art of theater)– 25, भारतीय चित्रकला( Indian art of drawing)- 26, भारतीय मूर्तिकला (Indian art of Sculpture)- 27

Week 11 : भारतीय स्थापत्यकला(Indian art of Architecture)- 28, वेदवाङ्मयपरिचयः (Introduction to Vedic Literature) – 29, पुराणवाङ्मयपरिचयः (Introduction to Purana Literature)- 30

Week 12 : आर्षकाव्यपरिचयः (Introduction to Arsha Kala)- 31, संस्कृतपद्यवाङ्मयपरिचयः (Introduction to Sanskrit poetic literature)- 32, संस्कृतगद्यवाङ्मयपरिचयः (Introduction to sanskrit prose literature)– 33

Week 13 : संस्कृतवाङ्मयपरिचयः (Introduction to sanskrit theatrical literature)– 34, पालिप्राकृतापभ्रंशवाङ्मयपरिचयः (Introduction to Apabramsha literature of Pali and Prakrit)– 35, संस्कृतलोकवाङ्मयपरिचयः( Introduction to literature of sanskrit lok)– 36

Week 14 : धार्मिकपरम्परायाम् आश्रमव्यवस्था- 37, धार्मिकपरम्परायां कालः- 38

धार्मिकपरम्परायां व्रतम्- 39, धार्मिकपरम्परायां गणपतिकल्पः ग्रहशान्तिश्च- 40

Week 15 : Assignment 2





**DR. APARAJITA BHATT**  
Assistant Professor  
National Law University, Delhi

**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (1/8/2018 to 1/12/2018)  
**EXAM DATE** : December 2018  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduation in any discipline  
Preliminary knowledge about Law & Technology

**OBJECTIVE OF COURSE**

- To understand the law relating to information technology
- To understand the challenges in the area of cyber law
- To understand the different facets of cyber crimes and learn about their prevention
- To understand the concept and issues related to net neutrality, internet governance and e-governance etc
- To make a comparative study with US, UK and other jurisdictions
- To understand the issues related to the jurisdiction in cyberspace
- To understand issues related to e-commerce
- To educate about the regulation of cyberspace at national and international level.

**LEARNING OUTCOME**

- Understand about the governance of internet and the issues relating to it.
- Learn about different kinds of cybercrimes and contraventions and their prevention.
- Understand about the issues and challenges in e-commerce
- Learn about privacy and data protection issues in cyberspace
- Understand computer forensics and the significance of digital evidence in the present world
- Understand the intricacies and challenges in digital and electronic signatures
- Understand the legal provisions under the Information Technology Act
- Comprehend cyber security issues
- Understand e-governance
- Analyse the concepts such as net neutrality

**COURSE PLAN**

**WEEK 1** : 1. Internet Governance, 2. Jurisprudence and Scope of Cyber Law

**WEEK 2** : 1. Jurisdictional Issues in Cyberspace, 2. Case Laws on Jurisdiction in Cyber space

**WEEK 3** : 3. Overview of IT Act 2000, 4. Digital and Electronic Signatures, 5. Adjudication and Online Dispute Resolution

**WEEK 4** : 6. E- commerce: Concept and Issues, 7. Taxation Issues related to e-commerce, 8. Financial Frauds and e-commerce

**WEEK 5** : 9. E-Contracts, 10. Consumer protection in Cyberspace

**WEEK 6** : 11. Cyber offences under the IPC-Challenges to the Old Criminal Justice System, 12. Cyber Crimes & Contraventions, 13. New Cyber Crimes

**WEEK 7** : 14. Phishing, 15. Hacking, Cyber Bullying, Cyber Defamation

**WEEK 8** : REVISION AND ASSIGNMENT WEEK ONE

**WEEK 9** : 1. Cyber Pornography and Obscenity, 2. Crime against Government-Cyber Terrorism, 3. Liability of Intermediaries

**WEEK 10** : 4. Computer Forensics, 5. Digital Evidence- Broad Principles

**WEEK 11** : 6. Copyright Law and Cyberspace, 7. Patent Law and Cyberspace, 8. Trademark Law and Cyberspace

**WEEK 12** : 9. International Cyber Law- US, 10. International Cyber Law- UK, 11. International Cyber Law- Other Jurisdictions

**WEEK 13** : 12. Online Profiling, 13. Cloud Computing, 14. Online Privacy Issues and Data Protection Law in India, 15. Cyber Security

**WEEK 14** : 16. Net Neutrality, 17. Electronic Governance

**WEEK 15** : REVISION, ASSESSMENT AND EVALUATION

**ABOUT INSTRUCTOR**

Dr. Aparajita Bhatt, Assistant Professor, Faculty of Law at National Law University, Delhi is a Gold Medalist and University topper in LL.M.(Business Law) and LL.B. She teaches Cyber Law and Corporate Law at the University. She has also worked as an Assistant Professor in National Law University, Jodhpur. Her doctorate work focuses on the legal aspects of mergers and acquisitions in the light of changes in the Indian corporate world. She has given lectures on several occasions on various issues in workshops organized for the training of police officers at Rajasthan Police Training Centre, Jodhpur. She has guided a number of LL.M. students for their dissertations and projects. Aparajita has been a resource person for Rajasthan Police Training Centre on several occasions and has delivered lectures on various topics of Cyber Law and Human Rights. She has also been a resource person for various other workshops, national and international conferences including Delhi Judicial Academy. She has contributed in Distance Education Program by supervising DEP dissertations and has also written modules on M&A. She has also written modules on Corporate Law for Indian Institute of Corporate Affairs. She has guided several research students for their post-graduate degrees. Her areas of interest are Cyber Law Mergers & Acquisitions, Company Law, Securities Law & Financial Market Regulations. She has presented papers in National and International Conferences/Seminars. She has also been a resource person for news channels. She has also been a coordinator for various projects, events and conferences at the University. She has also coordinated a paper titled Information and Communication Technology for the e-pg pathshala



**DR. YOGESH PAI**

Assistant Professor of Law and the Co-Director of Centre for Innovation, Intellectual Property and Competition (CIIPC) at National Law University Delhi

**TYPE OF COURSE** : UG/PG

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 15 weeks (01/08/2018 to 15/12/2018)

**EXAM DATE** : December, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Basic knowledge of property law; temperament to understanding science, tech and interest in creativity and innovation.

**OBJECTIVE OF COURSE**

The course on intellectual property (IP) will provide: i. Conceptual clarity on various categories of IP law as property and its different dimensions; ii. Deeper understanding of the nature and content of IP rights, IP transactions and IP remedies/ enforcement; iii. Deeper understanding of the role and limits of balancing competing interests embedded in IP law; iv. Understand the contextual and contemporary developments in IP law and why they matter in practice; v. Will equip students to deal with real world IP issues

**LEARNING OUTCOME**

After finishing this course, students will be able to develop:

- Conceptual clarity on various categories of IP law
- Deeper understanding of the nature and content of IP rights, IP transactions and IP remedies/ enforcements
- Deeper understanding of the role and limits of balancing competing interests embedded in IP law
- Understand the contextual and contemporary developments in IP law and why they matter in practice

**COURSE PLAN**

**Week 1:** Module 1: Introduction to Intellectual Property: A Conceptual Primer  
Module 2: Universal Origins of Intellectual Property  
Module 3: Theoretical Justifications for Intellectual Property  
Module 4: Economics of Intellectual Property: Innovation and Creativity - Policy Linkages

**Week 2:** Module 5: Legal Principles of International Intellectual Property Regime: Introduction to TRIPS  
Module 6: Intellectual Property and Interface with Fundamental Freedoms  
Module 7: TRIPS and Public Health: Challenges for Access to Medicines  
Module 8: Intellectual Property and Competition Law- A Primer

**Week 3:** Module 9: Concept of Invention, Novelty, Inventive Step and Industrial Application and Disclosure  
Module 10: Pharmaceutical Patents- Subject Matter Exclusions  
Module 11: Biotechnology Patents- Subject Matter Exclusions

**Week 4:** Module 12: Software and Business Methods Patents  
Module 13: Patents, Traditional Knowledge and Biodiversity

**Week 5:** Module 14: Originality Requirement in Copyright Law  
Module 15: Subject-Matter Requirement in Copyright Law  
Module 16: Neighbouring/ Related Rights

**Week 6:** Module 17: Trademarks- Concept of Distinctiveness and Grounds for Refusal of Trademark Registration  
Module 18: Trademarks- Challenges in Non-Conventional Marks and Domain Names Disputes  
Module 19: Well Known Marks

**Week 7:** Module 20: Industrial Designs: Definition of a design; Concept of Novelty and Originality; designs not patentable; - Functional Designs  
Module 21: Trade Secrets- Conditions of Protection  
Module 22: Geographical Indications: Substantive Conditions for Registration

**Week 8:** REVISION AND ASSIGNMENT

**Week 9:** Module 23: Plant Variety Protection – Conditions of Registration  
Module 24: Other Kinds of Intellectual Property

**Week 10:** Module 25: Economic and Moral Rights of Authors  
Module 26: Copyright in the Digital Context  
Module 27: IP Assignment and Licensing

**Week 11:** Module 28: Patent Rights- Limited Exceptions  
Module 29: Copyright- Fair Dealing  
Module 30: Limitations on Rights of Trademarks Owners

**Week 12:** Module 31: Principles of IP Exhaustion  
Module 32: Patents- Compulsory Licensing /Other Uses Without Authorization  
Module 33: Copyrights- Statutory and Compulsory Licensing

**Week 13:** Module 34: Patent Infringement  
Module 35: Copyright Infringement  
Module 36: Trademark Infringement and Passing-off  
Module 37: Ambush Marketing and Comparative Advertising

**Week 14:** Module 38: Nature of Remedies in IP Law  
Module 39: Patent law- remedies  
Module 40: Copyright- Civil and Criminal  
Module 41: Trademark Law- Civil and Criminal

**Week 15:** REVISION AND ASSIGNMENT

**ABOUT INSTRUCTOR**

Yogesh Pai is an assistant professor of law and the Co-Director of Centre for Innovation, Intellectual Property and Competition (CIIPC) at National Law University Delhi. Yogesh is the Thomas Edison Fellow (2017-18) at the George Mason University, Washington D.C. In the fall of 2012, Yogesh visited the School of Law, University of Washington as the Asian Law Centre short-term Visiting Scholar. Yogesh is on the roster of consultants with the World Trade Organisation for Regional Trade Policy Courses (RTPC) and a Tutor with the WIPO Academy Distance Learning Programme. Yogesh has published in national and international journals.





**PROF SUDESHNA BANERJEA**  
 PROFESSOR, DEPARTMENT OF MATHEMATICS,  
 JADAVPUR UNIVERSITY, KOLKATA

**TYPE OF COURSE** : POST GRADUATE

**INTENDED AUDIENCE** : POST GRADUATE STUDENT

**COURSE DURATION** : 15 weeks (10/8/18 to 30/11/18)

**EXAM DATE** : December, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Knowledge of Mathematics at undergraduate Honours level, knowledge of Functional Analysis and Complex Variable Theory.

### OBJECTIVE OF COURSE

Integral equation and integral transform are important mathematical tools in Applied Mathematics. This is a fifteen week course where the students will be introduced to the topic of Integral equation and integral transform and motivation of the study. In first six weeks students will learn various types of linear integral equations, their method of solution. In next nine weeks students will be introduced to various types of integral transforms, their properties and applications.

### LEARNING OUTCOME

Upon completion of the course, students will have the knowledge of various types of integral equations, their method of solution and different types of integral transforms and their applications. Students will be able to solve a boundary or an initial value problem by i) reducing to suitable integral equation ii) using suitable integral transform. Since any natural phenomena can be reduced to a boundary or an initial value problem, so the student will develop a skill to handle real world phenomena.

### COURSE PLAN

**Week 1: Chapter 1:** M1. Classifications of integral equations. M2. Occurrence of Volterra integral equations.

**Week 2: Chapter 1:** M3. Occurrence of Fredholm integral equations. **Chapter 2:** M1. The theory of Fredholm alternative. M2. Homogeneous Fredholm integral equations of second kind with degenerate kernel. M3. Solution of Fredholm integral equation with degenerate kernel: example.

**Week 3: Chapter 3:** M1: Fredholm integral equations of second kind with continuous kernel: solution by the method of successive approximations. M2. Fredholm integral equations of second kind with continuous kernel: solution by the method of successive approximations: example. M3. Method of successive approximations applied to Volterra integral equation of second kind.

**Week 4: Chapter 3:** M4. Fredholm integral equations of second kind with continuous kernel: iterated kernel. M5. Fredholm integral equations of second kind with continuous kernel: Fredholm theorems. M6. Fredholm integral equation of second kind with square integrable kernel and forcing term.

**Week 5: Chapter 4:** M1. Properties of integral equations with symmetric kernel. M2. Hilbert Schmidt theorem.

**Week 6: Chapter 5:** M1. Abel integral equation: Method based on elementary integration. M2. Abel integral equation: Method based on Laplace transform.

**Week 7: Chapter 6:** M1. Introduction to Fourier transform. M2. Fourier transforms of some simple functions. M3. Properties of Fourier transform. M4. Convolution theorem and Parseval relation

**Week 8:** REVISION AND ASSIGNMENT WEEK

**Week 9: Chapter 6:** M5. Application of Fourier transforms in solving linear ordinary differential equations. M6. Application of Fourier sine and cosine transforms in solving linear ordinary differential equations. M7. Application of Fourier transform in solving partial differential equations. M8. Application of Fourier sine and cosine transform to the solution of partial differential equations.

**Week 10: Chapter 7:** M1. An introduction to Laplace transform. M2. Operational properties of Laplace transform. M3. Convolution of Laplace transform.

**Week 11: Chapter 7:** M4. Method of evaluation of inverse Laplace transform. M5. Application of Laplace transform to differential equations

**Week 12: Chapter 8:** M1. An introduction to Mellin transform. M2. Operational properties of Mellin transform. M3. Evaluation of Mellin transform of some functions.

**Week 13: Chapter 9:** M1. Hankel transform and its properties. M2. Hankel transform of some known functions and applications.

**Week 14: Chapter 10:** M1. Introduction to Z transform. M2. Inversion of Z transform.

**Week 15:** REVISION, ASSESSMENT and EVALUATION WEEK

### ABOUT INSTRUCTOR

Educational qualification: Ph.D in Applied Mathematics from University of Calcutta.

Field of Specialization and expertise: Applied Mathematics, Theory of Water Waves, Integral Equations .

Presently working as a Professor in the Department of mathematics, Jadavpur University, Kolkata.

No. of publication: 62, No. Of Ph.D student: 6



**PROF. (DR.) Y.S.R. MURTHY**

Professor & Registrar; Executive Director, Centre for Human Rights Studies,  
O.P. Jindal Global University

**TYPE OF COURSE** : PG degree **COURSE DURATION** : 15 weeks (10/08/2018 to 23/11/2018)  
**INTENDED AUDIENCE** : Students studying at PG level such as **EXAM DATE** : first week of December  
 M.A. (Human Rights) programme in **NO OF CREDITS** : 4  
 Indian universities or LL.M with Human Rights specialization. The Course is also open to UG students.

**PRE-REQUISITES** : Exposure to undergraduate courses of Social Sciences/Law would be helpful.

**OBJECTIVE OF COURSE**

Overall objectives of the complete course including the expected learning outcome of the course are:

1. To give students a brief overview of theories of human rights
2. To give a thorough understanding of the international legal framework as well as institutional framework for the protection and promotion of human rights.
3. To give a brief overview of the regional mechanisms for the protection and promotion of human rights

**LEARNING OUTCOME**

By the end of the course students should be able to:

1. Demonstrate a good understanding of the theoretical foundations of human rights and the beginnings of the concept of human rights and the human rights system as we know it today.
2. Display a good understanding of the nature and scope of international human rights law and the UN Charter and Treaty based human rights machinery.
3. Demonstrate a good understanding of the practical application of international human rights law to specific human rights problems.

**COURSE PLAN**

**Week 01:-** 1. Historical Development of Human Rights: from Ancient Roots to Magna Carta, 2. Natural Rights, 3. Liberal Theory of Rights

**Week 02:-** 1. Sociological Theory of Rights, 2. Marxist Theory of Rights, 3. Cultural Theory of Rights, 4. Legal Positivist theory of Rights

**Week 03:-** 1. Human Rights Provision in the UN charter, 2. General Assembly Mandate of the UN General Assembly, 3. UN Security Council

**Week 04:-** 1. ECOSOC: Mandate of ECOSOC for the protection and promotion of Human Rights, 2. UN Human Rights Commission Historical Overview, 3. The Commission on the Status of Women

**Week 05:-** 1. UN Commission for Social Development, 2. CCPCJ Commission on Crime Prevention and Criminal Justice, 3. The International Court of Justice

**Week 06:-** 1. Human Rights Council; Birth of the Human Rights Council - Comparison between Human Rights Commission and Human Rights Council, 2. Human Rights Council: UN Secretary General's Report "In larger freedom towards security, development and Human Rights for all

**Week 07:-** 1. UN Women, 2. United Nations Human Settlement Programme (UN Habitat), 3. United Nations High Commissioner for Human Rights and the Office of the United Nations High Commissioner for Human Rights (OHCHR)

**Week 08:-** 1. United Nations High Commissioner for Refugees (UNHCR), 2. Treaty-Based Procedures: Introduction to Role of UN Treaty-Based Bodies, Part-A, 3. Treaty Based Bodies. Part B

**Week 09:-** 1. Overview of the Human Rights Committee (ICCPR), 2. Overview of the Committee on Economic Social and Cultural Rights, 3. Charter Based Procedures: Human Rights Council Complaints Procedure - 1503 Procedure

**Week 10:-** 1. Special procedures; the mandates of Special Rapporteurs, Representatives, Experts and Working group, 2. Universal Periodic Review (UPR), 3. Food and Agriculture Organization (FAO)

**Week 11:-** 1. International Labour Organization (ILO), 2. World Health Organization (WHO), 3. UNESCO, 4. United Nations Children's Fund (UNICEF)

**Week 12:-** 1. Regional Mechanisms- European System: Council of Europe and its Institutions; European Convention for the Protection of Human Rights and Fundamental Freedoms, 2. European Social Charter and the European Committee of Social Rights, 3. Other Human Rights Treaties, 4. Organization for Security and Cooperation in Europe

**Week 13:-** 1. Africa Systems, 2. Part A Inter-American System for protection of human rights, 3. Part – B The Inter-American System for the Protection of Human Rights: Human Rights Monitoring **Bodies**

**Week 14:-** 1. Arab Regional Mechanism: Human Rights, 2. Asian Mechanism: Review of Efforts to Establish a South Asian Human Rights Mechanism, 3. International Criminal Court

**Week 15:-** 1. Introduction to National Human Rights Protection System

**ABOUT INSTRUCTOR**

Dr. Y.S.R. Murthy is presently working as the Professor & Registrar and Executive Director, Centre for Human Rights Studies in the O.P. Jindal Global University, Sonapat. Prior to it, he served in the National Human Rights Commission of India in various capacities for over 12 years including as the Director, Policy Research, Programmes and Projects Division.

His books on 'Halsbury's Laws of India - Human Rights' and 'Human Rights Handbook' were published by LexisNexis Butterworths. He edited NHRC's Annual Journal on Human Rights for several years.

He was awarded the British Chevening Fellowship for pursuing M.A. degree in Human Rights from University of London in 1998-99. He secured his Ph.D. from Tamil Nadu Dr. Ambedkar Law University, Chennai.



**DR. SANTU GHOSH**

Assistant Professor, Department of Biostatistics, St. John's Medical College - an affiliated institute of Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka

<b>TYPE OF COURSE</b>	: Certificate	<b>COURSE DURATION</b>	: 14 weeks (13 <sup>th</sup> Aug to 20 <sup>th</sup> Nov 2018)
<b>INTENDED AUDIENCE</b>	: UG/PG/Diploma/Certificate	<b>EXAM DATE</b>	: 20 <sup>th</sup> November 2018
<b>PRE-REQUISITES</b>	: Fundamental knowledge on basic statistics and familiarity with the concept of computer programming.		
<b>OBJECTIVE OF COURSE</b>			

The course will give a brief introduction to R language for statistical computation. Starting from data processing to data visualization, tabulation/summarization, statistical comparison, exploration of association and effects estimation under R computation platform will be covered in this introductory course. Simultaneously, case study base course design will make learner fluent in contextual interpretation of statistical results. The course also partially introduces R-programming to enhance ability of a learner to execute user defined algorithm in statistical analysis.

**LEARNING OUTCOME**

The course will develop Fluency in R computation and data analysis. It will make learner familiar with R data structures, R objects R outputs, inbuilt R functions and finally, construction of user defined function in R. It will not only teach how to apply statistical methods with the help of R, but enable learner to choose appropriate statistical technique along with subject specific interpretation of results obtained from the analysis.

**COURSE PLAN**

- Week 01:-** Overview of R
- Week 02:-** Linear Algebra
- Week 03:-** Graphics in
- Week 04:-** Descriptive statistics
- Week 05:-** R inbuilt and user defined function
- Week 06:-** Testing of hypothesis
- Week 07:-** Simple Linear Regression
- Week 08:-** Mid-term assessment
- Week 09:-** Multiple Linear Regression
- Week 10:-** Categorical data analysis
- Week 11:-** Nonparametric statistics
- Week 12:-** Numerical Optimization
- Week 13:-** Maximum Likelihood Estimation
- Week 14:-** Case Study
- Week 15 :-** Examination

**ABOUT INSTRUCTOR**

The course coordinator has strong statistical background with almost 15years research experience in Public Health. Earlier he completed B.Sc. and M.Sc. in Statistics from University of Calcutta, Kolkata. Later he acquired an interdisciplinary PhD degree on 'Biostatistics- Environmental Health' from Faculty of Public Health, Sri Ramachandra University, Chennai. He also has more than 15years experience in R computing language and statistical analysis with plenty of research publications in international and national journals in the field of air pollution and health research in India.



**PROF. VIJAY SAKPAL**

Professor, Dept. of Mural, Sir J.J. School of Art,  
Mumbai

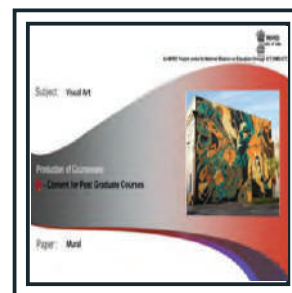
<b>TYPE OF COURSE</b>	: UG/PG	<b>COURSE DURATION</b>	: 20 weeks (2 <sup>nd</sup> July to 13 <sup>th</sup> Oct.'2018)
<b>INTENDED AUDIENCE</b>	: Students of art, artists, designers, sculptors, interior decorators, architects	<b>EXAM DATE</b>	: 15 <sup>th</sup> Week of the course i.e. 8 <sup>th</sup> to 13 <sup>th</sup> Oct 2018
<b>PRE-REQUISITES</b>	: The learners are expected to have completed Graduation in any discipline, artists, designers, sculptors, interior decorators, architects who are engaged to create magnificent and mesmerising Mural works		
<b>NO OF CREDITS</b>	: 4		

**OBJECTIVE OF COURSE**

This specialised course caters to the needs of Fine Arts students at Post-Graduate level who are interested in learning the nuances, trends and professional tips from the experts in this field and equip themselves with the vast reservoir of knowledge and experience which will be shared by these experts through very interesting as well as practical modules throwing light on minute details from the very starting to the finest execution of a particular style of Mural making.

**LEARNING OUTCOME**

This course on Mural Art will be beneficial to the students of art to attain competence and expertise in attempting and undertaking such Mural artworks in a very professional and systematic way providing the learners a very lucrative and monetary beneficial career besides satisfying their creative skills.

**COURSE PLAN**

**Week 01:-** 1. Introduction of Mural and History, 2. Different Types of Mural, 3. Temporary Mural Indoor

**Week 02:-** 4. Temporary Mural Outdoor, 5. Temporary Mural Wall Painting, 6. Multipurpose Medium (Tharmocol)

**Week 03:-** 7. Sketches For Indoor Mural, 8. Sketch Composition For Indoor Mural, 9. Sketch Convert 2-D To 3-D, Indoor

**Week 04:-** 10. Sketch Composition For Outdoor Mural, 11. Sketch Convert 2-D To 3-D, Outdoor, 12. Surface Making (For Tempera)

**Week 05:-** 13. Surface Making (For Fresco), 14. Tempera Painting, 15. Fresco Painting

**Week 06:-** 16. Tempera Painting On Readymade Surface (Bison Board), 17. Acrylic On Canvas Panel, 18. Mix Media On Canvas Panel

**Week 07:-** Assignment Week

**Week 08:-** 19. Acrylic On Wooden Panel, 20. Mix Media On Wooden Panel, 21. Oil On Canvas Panel

**Week 09:-** 22. Terracotta Mural (Ceramic), 23. Ceramic's Mural On Tiles (Readymade Surface On Glaze), 24. Siporex Carving

**Week 10:-** 25. O.P Carving, 26. Metal Foil Work (Part I), 27. Metal Foil Work (Part II)

**Week 11:-** 28. Metal Enamelling, 29. Moulding And Casting

**Week 12:-** 30. Fibre Moulding and Casting, 31. Actual Size Composition (Indoor)

**Week 13:-** 32. Actual Size Composition (Outdoor), 33. Actual Material Arrangement (Indoor)

**Week 14:-** 34. Installation Of Mural (Indoor), 35. Installation Of Mural (Outdoor)

**Week 15:-** Final Exam

**ABOUT INSTRUCTOR**

Prof. Vijay Gopal Sakpal is Faculty Member of Dept. of Drawing & Painting (Mural), Sir J.J. School of Art, Mumbai. He did BFA (Drawing & Painting) and MFA in Portraiture from Sir J.J. School of Art, Mumbai. He had to his credit many awards like Sir J.J. School of Art Mumbai Annual Exhibition Award 1988-1995; Art Society of India Award; Bombay Art Society Award 1998; Maharashtra State Art Award 1994, 1996; VV Oak Award, Pune, 2001; Nasik Kala Niketan Award, 1992, 1994.

He has participated in many All-India, Regional and State level exhibitions. Prof. Sakpal has held four one-man shows namely Jahangir Art Gallery, Mumbai, 1999; Shrushti Art Gallery, Aurangabad, 2000; Art Walk Gallery, Mumbai, 2001; Jahangir Art Gallery, Mumbai, 2017.

His collections are with many National & International collectors like Bhawani Museum, 2000; Raj Bhawan, Mumbai, 2003, 2012; Restoration of Baburao Sadwelkar Painting Mural at NDA, Pune, 2005; Maharashtra Chitrarath Design for Republic Day Parade at Rajpath, 2014; IIFT, New Delhi, 2009. He had delivered Talks, Lectures & Demonstration of Portraits & Landscape in various Institutions and Private organizations in India and abroad.







## DR. MADHUMANGAL PAL

Professor, Department of Applied Mathematics with Oceanology and Computer Programming,  
Vidyasagar University, Midnapore  
West Bengal

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 15 weeks (10/08/2018 & 30/11/2018)

**EXAM DATE** : Eighth and fifteenth weeks

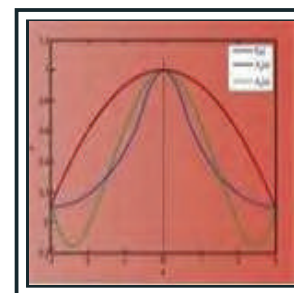
**NO OF CREDITS** : 4

**PRE-REQUISITES** : The basic knowledge of Calculus and Algebra of undergraduate level are required. To understand the C program, the very basic concept of C programming is needed.

### OBJECTIVE OF COURSE

The main objectives of the course is to provide students with the specialist knowledge to

1. the sources and types of errors in numerical computations
2. develop several numerical methods for interpolation
3. develop appropriate numerical methods to approximate a function
4. derive several methods to solve an algebraic and transcendental equations
5. develop direct and iterative methods to solve a system of linear and non-linear equations
6. develop several numerical methods to solve ordinary and partial differential equations
7. derive appropriate methods to find derivative and integration of a function for single and double variables
8. design appropriate numerical methods to find eigenvalues and eigenvectors of a large matrix.



### LEARNING OUTCOME

The students will be able to

1. perform an error analysis for a numerical method
2. calculate the value of a function for a given value of the argument from a table of values by appropriate interpolation formula
3. approximate a function
4. solve an algebraic and transcendental equations
5. solve a system of linear and non-linear equations by direct and iterative methods
6. solve ordinary and partial differential equations
7. evaluate derivative and integration of a single and double variables function
8. calculate eigenvalues and eigenvectors of a large matrix.
9. writing of program for numerical problem

### COURSE PLAN

**Week 01:-** 1. Error in Numerical Computations. 2. Propagation of Errors and Computer Arithmetic.

**Week 02:-** 1. Operators in Numerical Analysis. 2. Lagrange's. Interpolation. 3. Newton's Interpolation Methods. 4. Central Deference Interpolation Formulae.

**Week 03:-** 1. Aitken's and Hermite's Interpolation Methods. 2. Spline Interpolation. 3. Inverse Interpolation. 4. Bivariate Interpolation.

**Week 04:-** 1. Least Squares Method. 2. Approximation of Function by Least Squares Method. 3. Approximation of Function by Chebyshev Polynomials.

**Week 05:-** 1. Newton's Method to Solve Transcendental Equation. 2. Roots of a Polynomial Equation. 3. Solution of System of Non-linear Equations.

**Week 06:-** 1. Matrix Inverse Method. 2. Iteration Methods to Solve System of Linear Equations. 3. Methods of Matrix Factorization.

**Week 07:-** 1. Gauss Elimination Method and Tri-diagonal Equations. 2. Generalized Inverse of Matrix. 3. Solution of Inconsistent and Ill Conditioned Systems.

**Week 08:-** REVISION AND ASSIGNMENT WEEK

**Week 09:-** 1. Construction of Characteristic Equation of a Matrix. 2. Eigenvalue and Eigenvector of Arbitrary Matrices. 3. Eigenvalues and Eigenvectors of Symmetric Matrices.

**Week 10:-** 1. Numerical Differentiation. 2. Newton-Cotes Quadrature.

**Week 11:-** 1. Gaussian Quadrature. 2. Monte-Carlo Method and Double Integration.

**Week 12:-** 1. Runge-Kutta Methods. 2. Predictor-Corrector Methods.

**Week 13:-** 1. Finite Difference Method and its Stability. 2. Shooting Method and Stability Analysis.

**Week 14:-** 1. Partial Differential Equation: Parabolic. 2. Partial Differential Equations: Hyperbolic. 3. Partial Differential Equations: Elliptic

**Week 15:-** Examination

### ABOUT INSTRUCTOR

Prof. M.Pal is currently a Professor of Applied Mathematics, Vidyasagar University. Prof. Pal is the author of eight text books published from India and United Kingdom. One of them is Numerical Analysis for Scientists and Engineers: Theory and C Program, published by Narosa, New Delhi. Prof. Pal has published about 280 research papers in International and national journals. Prof. Pal is the Editor-in-Chief of "Journal of Physical Sciences", "Annals of Pure and Applied Mathematics", section editor of "International Journal of Computational Intelligence Systems" and member of editorial Boards of many journals. He has visited China, Greece, London, Taiwan, Malaysia, Thailand, Hong Kong, Dubai and Bangladesh for academic purpose.



**PROF. (RETD) (DR.) A.K.SAIHJPAL**

Former Dean, Faculty of Commerce and Management & Founder Director UIAMS, Panjab University, Chandigarh

**PROF. (DR.) VISHAL KUMAR**

Professor, School of Management, Maharaja Agrasen University, Baddi (H.P.)

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : PG Courses of Commerce, Management and Professional Studies

**COURSE DURATION** : 15 weeks (1<sup>st</sup> Aug to 30<sup>th</sup> Nov, 2018)  
**EXAM DATE** : As per the decision of the University  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : The learners are expected to have completed Graduation in any discipline.

### OBJECTIVE OF COURSE

This course aims to prepare students for understanding the human behaviour in an organization for getting desirable results. The course will provide a good foundation for students intending to study management principles and practices with the study of human behaviour within the organization. The objective of the course is to provide students with the essential content and experiences they need to become a successful manager and an effective employee. By taking this course, students will understand themselves and other people at work and will be able to learn how to create effective work groups to be a successful in life.

### LEARNING OUTCOME

After completing this course, the students shall be able to:

1. Identify and analyze aspects of human behaviour at individual and group level.
2. Outline various factors that affect organizational behaviour.
3. Draw a relation between organizational factors such as structure, levels, conflict and leadership.
4. Study micro and macro factors affecting organizational behaviour.
5. Discuss theories by eminent management experts and professionals.

### COURSE PLAN

**Week 1** : Organisational Behaviour- Meaning and Concept, Organisational Behaviour- Importance and Fields of Study

**Week 2** : Roles and Skills of Managers, Organisational Behaviour- Challenges

**Week 3** : Field of OB: Individual, Groups & Systems as building blocks, Organisational Behaviour Models, Evolution of Organisational Behaviour- Part 1

**Week 4** : Evolution of Organisational Behaviour- Part 2, Researches in Organisational Behaviour, International Organisational Behaviour

#### Assessment-1

**Week 5** : Perception, Personality

**Week 6** : Learning: Concept and theories Values

**Week 7** : Attitude: Meaning and Concept, Attitude: Formation and Change, Motivation: Content theories

**Week 8** : Motivation: Process theories, Job Satisfaction, Emotions and Emotional Intelligence :

**Week 9** : Formation of Groups, Types of Groups

**Week 10** : Team Dynamics, Group Decision Making, Interpersonal Relations

#### Assessment-2

**Week 11** : Communication- Nature, Types and Barriers, Leadership- Nature, Importance and Styles, Theories of Leadership

**Week 12** : Power and Politics, Conflict, Foundations of Organization Structure

**Week 13** : Organizational Design, Diversity and Its Management, Stress among Employees

**Week 14** : Work Life Balance, Organizational Change and Development, Organizational Culture

**Week 15** : Employee Empowerment, Learning Organisation, Ethical Behaviour in Organizations

#### Final Exam



### ABOUT INSTRUCTOR

Prof. (Dr.) A.K. Saihjpai is an eminent personality in the field of Commerce and Management. He is M.Com, Adv. Dip. in Taxation Law and Ph.D in Financial Management. Dr. Saihjpai joined Panjab University, Chandigarh in January 1975. He has more than 35 years of teaching experience. He has guided more than 30 M.Phil and 8 Ph.D scholars and has also published 16 well-acclaimed research papers in the renowned journals of Commerce and Management. He has functioned as Head of Commerce Department, University School of Open Learning for over 14 years. He was the founder of starting B.Com classes through Distance Learning mode at Panjab University, Chandigarh in 1975 and also started Post Graduate Diploma in Office Management, Master of Finance & Control & lastly M.Com and MBA through the same mode.

Prof. (Dr.) Vishal Kumar is the Co-Coordinator and Resource Person of this course. He is M.Com, UGC NET, MBA and Ph.D. He is a distinguished scholar, an academician of National and International repute and a very popular teacher. He is working as Professor at School of Management, Maharaja Agrasen University, Baddi (H.P.). He has 21 years of teaching experience as faculty in Commerce and Management. He is a prolific writer and has authored 24 text books and 3 edited books covering an array of topics pertaining to Commerce and Management. He has published 40 well-acclaimed Research Papers and also presented 42 Research Papers at National and International conferences/seminars. He has visited various countries to participate in International Conferences. He has also completed a project e-PG Pathshala in Management as Coordinator of the Paper "Entrepreneurship Development and Project Management".



**ALAKA DAS**

Professor, Department Of Mathematics,  
Jadavpur University

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 15 weeks (10<sup>th</sup> Aug to 30<sup>th</sup> Nov, 2018)

**EXAM DATE** : Assignment on Week 8 and Week 15

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Knowledge of Linear Algebra, Ordinary Differential Equations and Theory of Special Functions.

### OBJECTIVE OF COURSE

To Learn Theory Of Partial Differential Equations And Its Applications

### LEARNING OUTCOME

1. Learner will have the knowledge on the theory of partial differential equation.
2. Learner will develop a skill to solve partial differential equation independently.

### COURSE PLAN

#### Week 01:-

Basic Ideas of PDE

#### Week 02:-

Simultaneous Differential Equations of First Order First Degree, Pfaffian Differential Equations, Linear and Quasi-Linear First Order Equations.

#### Week 03:-

Nonlinear First Order PDE, Charpit's and Jacobi's Method, Solutions Satisfying Given Conditions

#### Week 04:-

Introduction to Second Order PDE, Solution of Second Order PDE with Constant Coefficients and Variable Coefficients

#### Week 05:-

Elliptic Differential Equations

#### Week 06:-

Parabolic Differential Equations

#### Week 07:-

Hyperbolic Differential Equations

#### Week 08:-

Revision and Assignment

#### Week 09:-

Application of Integral Transform methods specifically Laplace Transform and Fourier Transform

#### Week 10:-

Application of Henkel and Mellin Transform, Finite Integral Transform Method

#### Week 11:-

Green's Function Method of Solving PDE

#### Week 12:-

Eigen Function Approach to Solve PDE

#### Week 13:-

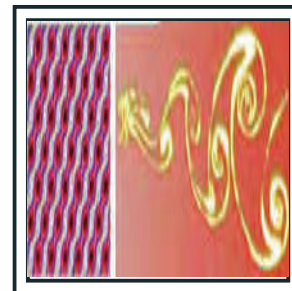
Nonlinear Wave Equation, KDV Equation, Dispersion and Dissipation

#### Week 14:-

Burgers' and Schrödinger Equation

#### Week 15 :-

Revision and Assignment



### ABOUT INSTRUCTOR

- Lecturer in the Department of Mathematics of Hooghly Women's College during 2001-2005.
- Lecturer in the Department of Mathematic of Jadavpur University during 2005-2006.
- Senior Lecturer in JU during 2006-2010.
- Reader in JU during 2010-2013.
- Associate Professor in JU during 2013-2016.
- Professor in JU since 2016.

Research Interest:- Dynamical Systems, Nonlinear Dynamics, Hydrodynamic and Hydromagnetic Instabilities, uncertainty and computer vision



**PROF. (DR.) G.S. BAJPAI**

Professor (Criminology &amp; Criminal Justice) &amp; Registrar

<b>TYPE OF COURSE</b>	: PG Students	<b>COURSE DURATION</b>	: 15 weeks (01/08/2018 to 31/12/2018)
<b>INTENDED AUDIENCE</b>	: Pursuing PG in Law, Commerce, Business Administration Pursuing courses of Company Secretary or Chartered Accountancy	<b>EXAM DATE</b>	: December 2018
<b>PRE-REQUISITES</b>	: Preliminary Knowledge about Social Sciences Preliminary Knowledge about Social Research Preliminary Knowledge about Legal Research	<b>NO OF CREDITS</b>	: 4

**OBJECTIVE OF COURSE**

The applications of research methodology to legal research have yet to receive adequate attention India. For want of various reasons, this discipline is now gaining increased attention. This paper now forms a part of core courses in the one year LL.M. programmes recognized by the U.G.C. Besides, the need for empirical methodology in legal research is getting far more pronounced for the objectives like policy and programme evaluation, law impact assessment and implementation analysis. This course would enable the participants to imbibe the basic concepts in legal research culminating into the learning of doctrinal and non-doctrinal or empirical methods of research.

**LEARNING OUTCOME**

After completing the MOOC Course, the applicant shall be able to:

- Understand the concept and application of research techniques
- Draw research objectives, hypothesis and research design
- Know about the various types of research methods
- Comprehend applicability of various research models in policy making.
- Know about methods of review of literature and data collection
- Understand modes of data processing.
- Utilize a variety of research methods in developing research proposals

**COURSE PLAN**

**Week 1** - Basics of Research, Legal Research, Legal Reasoning

**Week 2** - Socio-Legal Research, Research Problem, Research Design

**Week 3** - Hypothesis, Qualitative and Doctrinal Methods in Research, Quantitative Methods in Research, Sampling

**Week 4** - Methods of Data Collection, Tools & Techniques of Data Collection, Data Analysis

**Week 5** - Video, Text, Discussion forum, Live chat, Quiz,

**Week 6** - Video, Text, Discussion forum, Live chat, Quiz

**Week 7** - Video, Text, Discussion forum, Live chat, Quiz,

**Week 8** - Revision and Assignment

**Week 9** - Measurement, Scaling

**Week 10** - Reliability & Validity, Primary & Secondary Data

**Week 11** - Survey Method, Content Analysis, Case Study Method

**Week 12** - Projective Techniques, Data Processing, Statistical Package for Social Sciences (SPSS)

**Week 13** - Drawing Conclusions, Report Writing

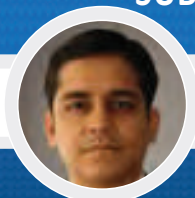
**Week 14** - Citation Patterns, Plagiarism

**Week 15** - REVISION, ASSESSMENT and Evaluation

**ABOUT INSTRUCTOR**

Prof G S Bajpai serves as Professor of Criminology & Criminal Justice; Chair Professor at K.L Arora Chair in Criminal Law at National Law University, Delhi and also as the Chairperson at the Centre for Criminology & Victimology. He is also the Registrar, National Law University, Delhi. Before this, he was serving (2007-2011) as Professor & Chairperson at the Centre for Criminal Justice Administration, National Law Institute University, Bhopal (MP). Prof. Bajpai did his post doctorate study (2004) as Commonwealth Fellow at the Department of Criminology, Leicester University, U.K. Prof. Bajpai has more than 25 Years of Teaching/ Research Experience.





**DR. RANGIN PALLAV TRIPATHY**  
Assistant Professor, NLU Odisha



**DR. MUKUL RAIZADA**  
Assistant Professor, NLU Delhi

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 15 weeks (01/08/2018 to 31/12/2018)

**EXAM DATE** : December, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : For pursuing this course, students are required to have minimum graduate degree in Law and they should be familiar with the following concepts:

**Preliminary knowledge of criminal law**

**Preliminary knowledge about uniqueness of criminal law in the legal system**

**Preliminary knowledge about societal influence in the shaping of criminal law**

### OBJECTIVE OF COURSE

- To understand the foundations of criminal law along with the critical constituents of a crime
- To comprehend the principles of liability and punishment under the Indian Penal Code
- To grasp the nuances of inchoate offences
- To analyse the scope and application of the General Exceptions
- To understand the dimensions of various sexual offences
- To appreciate the context of several offences relating to the institution of marriage
- To comprehend the various offences concerning human body including that of murder
- To analyse the offences concerning property and reputation
- To understand the nuances of offences against the state
- To appreciate the foundation of white collar crimes
- To grasp the context of caste based offences

### LEARNING OUTCOME

After the completion of the course, the following is expected from the learner

- The ability to determine if a particular set of facts can be classified as criminal conduct keeping in mind the ingredients and nuances of various offences.
- The capacity to know if the person being accused of committing the crime can be exempted from criminal liability under any of the principles of General Exceptions.
- The ability to determine the minimum and maximum punishment that may be imposed on a person if he is held guilty of having committed a crime.
- The capacity to understand the ongoing debates in the area of criminal law and contribute intelligently in any discussion on reforms in criminal law.

### COURSE PLAN

**Week 01:-** Introduction to Criminal Law

**Week 02:-** Principles of Liability and Punishment under IPC

**Week 03:-** Inchoate Offences

**Week 04:-** General Exceptions

**Week 05:-** Sexual Offences Part-1

**Week 06:-** Sexual Offences Part-2

**Week 07:-** Offences Concerning Marriage

**Week 08:-** Revision and Assignment

**Week 09:-** Offences of Culpable Homicide and Murder

**Week 10:-** Other Offences Concerning Human Body

**Week 11:-** Offences Concerning Property and Reputation

**Week 12:-** Offences Against the State

**Week 13:-** White Collar Crimes

**Week 14:-** Caste Based Offences

**Week 15 :-** Revision, Assignment and Evaluation

### ABOUT INSTRUCTOR

#### Dr. Rangin Pallav Tripathy

Assistant Professor of Law, National Law University Odisha, Cuttack

Dr. Rangin Pallav Tripathy has been teaching at National Law University Odisha since 2010. He has several publications in referred journal to his credit in the area of judicial appointments, access to justice and judicial performance evaluation. He has also authored a book titled 'Rights Without Law'. He is currently associated with two projects from Department of Justice in the area of judicial reforms.

#### Dr. Mukul Raizada

Assistant Professor of Law, National Law University, Delhi.

He has a research experience of 3 years and teaching experience of fifteen years at the Graduate levels (LL.B.) (3 yrs and 5 yrs) and Masters (LL.M.). He has research articles to his credit published in National and International journals. He has also coordinated a few national and international workshops and conferences. He has delivered lectures as resource faculty in many professional development programs.





**DR. DIBYENDU DE**

Associate Professor, Department of Mathematics,  
University of Kalyani

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 15 weeks (08/08/2018 to 30/11/2018)

**EXAM DATE** : 06/10/2018(first assessment)

Final Exam : 08/12/2018 (tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Knowledge of elementary set theory is required. Zorn's Lemma, well ordering principle, cardinal number and ordinal number will be used frequently in the discussions. Knowledge of Real Analysis and complex analysis, in particular continuous functions is necessary. Some knowledge of number theory will also be required to tackle some examples. Knowledge of metric spaces will be appreciated but not necessary.

**OBJECTIVE OF COURSE**

Topology is in fact study of surfaces. This course is a twenty-week program introducing fundamental notions of topology, for example: countability axioms, separation axioms, compactness and connectedness. Starting from the definition of topology and bases we shall enter into different topological properties. We shall also examine which properties are productive properties. We shall also introduce the notion of identification topology, which will enable students to form new interesting topological spaces from old ones.



**LEARNING OUTCOME**

Upon completion of the course, students will be competent in topology. They will be able to discuss about continuous functions and will gather knowledge about compactness and connectedness, which are extremely useful in various branches of mathematics. They will learn several separation axioms which will guarantee rich supply of continuous functions. Students will also be friendly with manifolds, which enables them to enter in geometric objects. This course will prepare the students to enter in different kinds of research area for example, algebraic topology, geometry, topological dynamics etc.

**COURSE PLAN**

- Week 01:-** Introduction to definition of Topological spaces, Base of Topological spaces.
- Week 02:-** New spaces from old one, Introduction to Continuity, Homeomorphism.
- Week 03:-** Product topology, Metrizable spaces.
- Week 04:-** First countability and Second countability, Lindelofness.
- Week 05:-** Separation Axioms, Separation Axioms: Normality, Properties of normal spaces.
- Week 06:-** Urysohn's Lemma, Tietze Extension Theorem.
- Week 07:-** Introduction to Connected spaces, Examples of Connected Spaces, Path Connectedness, Components, Matrix Lie groups.
- Week 08:-** REVISION AND ASSIGNMENT WEEK, Assignment for 10 Marks
- Week 09:-** Introduction to Compact topological spaces, Finite product of Compact spaces,
- Week 10:-** Alexander sub-base theorem, Tychonoff product Theorem.
- Week 11:-** Compactness in metric spaces, Locally compact spaces, Compactness in metric spaces, some advanced properties.
- Week 12:-** Equicontinuity, Ascoli's theorem, Pointwise and Compact Convergence, Compact Open Topology, Baire Spaces.
- Week 13:-** Stone Weierstrass Theorem, Stone Cech compactification.
- Week 14:-** Quotient Space, Orbit Space.
- Week 15 :-** REVISION, ASSESSMENT and EVALUATION WEEK

**ABOUT INSTRUCTOR**

Ph.D. in Pure Mathematics, University of Calcutta, 2005

**Research Interest**

Combinatorics, Algebra in the Stone-Cech compactification of discrete semigroup and its application to Ramsey Theoretic, Ergodic Theory.

**Post Doctoral Experiences**

1. May 2008 to September 2008 : Postdoctoral Research Fellow in the University of Witwatersrand, Johannesburg.
2. October 2009 to December 2009 : Visitor, Instituto de Matematicas Interdisciplinar (IMI) at Universidad Complutense de Madrid.

**Teaching**

Post Graduate : General Topology, Algebraic Topology,  
Measure and Integration, Ergodic Theory and Topological dynamical system





**DR. PRASHANT KUMAR GAUTAM**  
 Director & Associate Professor, UIHTM, Panjab University,  
 Chandigarh

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : PG

**COURSE DURATION** : 18 weeks (6<sup>th</sup> Aug to 10<sup>th</sup> Dec, 2018)

**EXAM DATE** : December 2018

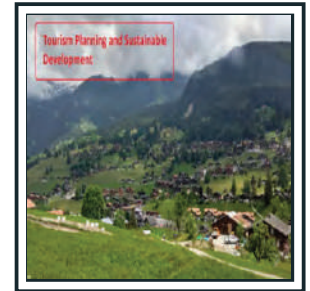
**NO OF CREDITS** : 4

### OBJECTIVE OF COURSE

- The course will help to develop an understanding of the basic concepts of Tourism Planning, both for public and private sector among the students.
- The learners will learn about the role of planning in tourism and understand about the role of the government in the tourism planning
- All the important attributes of tourism planning will nurture the students in having good knowledge about planning & sustainable development.

### LEARNING OUTCOME

This course is an attempt to prevent disorderly tourism development, in order to successfully overcome the daily changes that occur in turbulent surrounding, planning of sustainable tourism development occurs as the only way to do it successfully. So, sustainable development refers to the use without exploitation of natural, cultural and all other tourist resources from the current generation, it means to preserve them for future use by future generations. Since the development of tourism in a certain area largely dependent on natural and anthropogenic attractiveness which are located in the surrounding, the practicing of sustainable development gets more and more important.



### COURSE PLAN

#### Week 1 to 04

Levels, type and process of planning.  
 Conceptualization, Background Analysis, In-depth Research and Analysis Phase  
 Tourism project feasibility study  
 Synthesis phase and preparation of statements in Destination planning  
 Policy making bodies in India  
 Involvement of Local community in tourism Development  
 An outline of L K Jha Committee, 1963  
 National Tourism Policy, 1982  
 Destination Development and its components  
 National action Plan on Tourism, 1992  
 The latest policy document on tourism

#### Week 05 to 08

Tourism Planning at International, National and State Level  
 Tourism and Five year plans in India  
 Objective Setting, Goal setting, Strategy setting and Plan writing  
 Techniques of Plan Formulation  
 Planning for tourism Destinations  
 Tourism planning, significance, Constraints, Grey areas and Scope  
 Destination Life Cycle Concept  
 Sources of Funding, Incentives & Concessions extended for tourism Projects  
 Economics of Tourism  
 Positive and negative impacts of tourism (environmental, economic, socio-cultural).

### ABOUT INSTRUCTOR

Author is an expert in the field of Tourism Planning and Development. He is also holding the position of Treasurer, Indian Tourism and Hospitality Congress (ITHC) and is a member of AICTE All India Board of Hospitality and Tourism Management. Dr. Gautam is also a Member of Core Group for assisting Mentor Council, Ministry of Culture, Govt. of India and a member of Tourism Committee of Saraswati Vikas Board of Haryana Govt. He has done 3 minor research projects and undertaking one major research project in tourism. He has 40 research paper and 12 books to his credit.

#### Week 09 to 12

Concept of mass tourism  
 Emergence of alternative tourism, conventional versus alternative tourism  
 Mass vis-à-vis selective tourism.  
 Synergism between tourism promotion & nature conservation  
 Environment and tourism – areas of conflict, symbiosis and synergy  
 Tourism in various bio-geographic realms and specific situation of environmental concern.  
 United Nations Conference on Environment and Development (UNCED) Agenda 21  
 Sustainable Development: Historical Background  
 The Nature and Scope of Sustainable Tourism  
 Towards a New Approach to Sustainable Tourism Management  
 Global Warming and Sustainable Development

#### Week 13 to 16

Environmental Dimension  
 Economic Dimension  
 Social Dimension  
 Sustainable Tourism Development-Guiding Principles for Planning and Management  
 Empowering Community through tourism  
 Community based tourism  
 Ecotourism  
 Future of Sustainable Tourism

#### Week 17 to End

Recapitulation, Discussion on Important Topics Again and Overview of the syllabus, Examination





## PROF FARHAN JALEES AHMAD

Dean, Interdisciplinary Sciences & Technology, Professor, Pharmaceutics,  
Faculty of Pharmacy, Jamia Hamdard, New Delhi

**TYPE OF COURSE** : Certificate  
**INTENDED AUDIENCE** : UG students

**COURSE DURATION** : 20 weeks (July to November)  
**EXAM DATE** : December 2018  
**NO OF CREDITS** : 3

**PRE-REQUISITES** : The candidates should have a basic understanding of dosage forms delivery systems.

### OBJECTIVE OF COURSE

The technology by which a drug is delivered into the human body can have a important effect on its therapeutics effect. Most of the drugs have a concentration range within which maximum efficacy is. Controlling the pharmacokinetics, pharmacodynamics, non-specific toxicity, immunogenicity, biorecognition, and efficacy of drugs is desired. These strategies are known as drug delivery systems (DDS), and are based on multidisciplinary approaches that combine polymer science, pharmaceutics, chemistry, and molecular biology.



### LEARNING OUTCOME

After successful completion of the course student will be able to:

- Understand the concepts and applications of Drug Delivery Systems.
- Apply knowledge in developing various formulations as per drug characteristics
- Develop various evaluation parameters for oral, parenteral, topical etc. drug delivery systems.

### COURSE PLAN

**week 1:** Introduction to Controlled Release drug delivery system  
Factors affecting fabrication of CDDS

**week 2:** Types of controlled release systems

**week 3:** Continuous release systems

**week 4:** Types of Oral controlled release devices

**week 5:** Introduction to Mucoadhesive drug delivery

**week 6:** Factors affecting mucoadhesion and evaluation techniques

**week 7:** Introduction to Osmotic drug delivery

**week 8:** Introduction to parenteral drug delivery, Infusion devices

**week 9:** Implants and depots

**week 10:** Introduction to Transdermal drug delivery

**week 11:** Types, formulation and evaluation of transdermal delivery system

**week 12:** Techniques of enhancing skin permeation, Advances in Transdermal drug delivery systems

**week 13:** Introduction to ocular drug delivery, Intraocular drug delivery

**week 14:** Advances in ocular drug delivery systems

**week 15:** Introduction to nasal drug delivery

**week 16:** Nasal transport route and mechanism Nasal drug delivery systems

**week 17:** Nose to brain delivery of drugs

**week 18:** Introduction to pulmonary drug delivery, applications of pulmonary delivery system

**week 19:** Colloidal drug delivery Materials for colloidal drug delivery

**week 20:** Introduction to Controlled Release drug delivery system

### ABOUT INSTRUCTOR

Prof. Farhan Jalees Ahmad is working as a Professor in Deptt of Pharmaceutics, School of Pharmaceutical Education & Research, Jamia Hamdard, New Delhi. He has 26 years experience in Research and Teaching with Ranbaxy Research Laboratories as Scientist and Jamia Hamdard. He is working in the area of Nanomedicine for the last 15 years. Four of his nanoproducts are approved by DCGI for Phase-III clinical studies. He has been granted projects to a tune of rupees 5.5 crores from DBT, CCRUM, AYUSH, UGC, DST and International agencies like FIP and OPCW etc.

He has earned awards including Young Scientist from DST, Scientist of the Year-2005 from NESI, UGC Research Award 2011, Bharat Jyoti Award 2011, Pharma Ratan 2017, ABAP Senior Scientist Award 2017. He has a US patent, Two PCT and 24 Indian patents to his name. He has published more than 300 research and review papers, 12 Book chapters, 9 books, He has a total Citations of 7654, H-index of 41 and i-10 index of 164.







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Indian Institutes of Management  
Bangalore



## Management and Professional Courses



MHRD



# Management and Professional Courses

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**PROFESSOR M S NARASIMHAN**  
Professor, IIMB

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 6 weeks (1<sup>st</sup> June to 28<sup>th</sup> Dec, 2018)  
**EXAM DATE** : December 2018  
**NO OF CREDITS** : 2

**PRE-REQUISITES** : Open to all educational and professional background

### OBJECTIVE OF COURSE

This course will explain how accounting information is relevant to managers, and how it can be processed and analyzed for effective managerial decision-making. By examining the costing information that is extensively used across three key managerial functions of planning, decision-making and controlling, the course equips non-finance managers with basic managerial accounting skills. This course provides insight on the cost structure of products and services, costing systems, budgeting and variance analysis techniques. This course will help learners understand:

- Basics of Accounting
- Process Costing
- Cost Allocation
- Activity-based-costing
- Cost Analysis for Decision Making
- Budgeting
- Variance Analysis



### LEARNING OUTCOME

At the end of this course, the learner will be able to understand the basic cost terms and concepts, preparation of cost sheet, costing systems like job costing, product costing, activity based costing, cost allocation techniques, variance analysis. The learner will also explore absorption costing, marginal costing, break even analysis, optimal product mix, budgeting and other techniques and apply this information for effective managerial decision making.

### COURSE PLAN

- Week 1:-** Introduction to Management Accounting
- Week 2:-** Product Costing
- Week 3:-** Cost Allocation and Activity Based Costing
- Week 4:-** Cost Analysis for Decision Making
- Week 5:-** Budgeting
- Week 6:-** Variance Analysis

### ABOUT INSTRUCTOR

Professor M S Narasimhan teaches courses on Management Accounting, Financial Accounting, Corporate Finance and Investments. His areas of interest include Management Accounting, Corporate Finance and Capital Markets. He is a member of the Institute of Cost and Works Accountants of India. He has received his PhD from University of Madras. He has also completed a study on Corporate Disclosure Practices in India, sponsored under the FIRE project. He has published several articles and research studies in national and international journals and financial newspapers.





## PROFESSOR PADMINI SRINIVASAN

Professor, IIMB

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 6 weeks (1<sup>st</sup> June to 28<sup>th</sup> Dec, 2018 )

**EXAM DATE** : December 2018

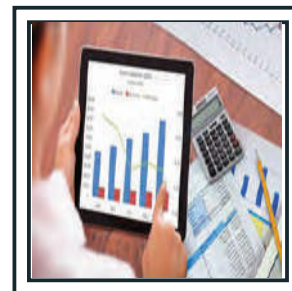
**NO OF CREDITS** : 2

**PRE-REQUISITES** : Open to all from any background

### OBJECTIVE OF COURSE

This course is designed to help learners from all fields to understand financial statements and analyse them for better decisions. This course will help:

1. Understand the various elements of financial statements
2. Identify the accounting principles related to its preparation
3. Explore the accounting rules related to the elements of financial statements
4. Apply tools and techniques to analyse and interpret the key parameters of financial performance for better decision making



### LEARNING OUTCOME

At the end of this course, the learners will be able to understand the basic accounting concepts, financial statements and their elements. They will get across various accounting standards with respect to the elements in the financial statements. It will also enable them to apply the tools and techniques for analysing the financial statements and interpret them for better decision-making.

### COURSE PLAN

This is a 5-week course, with 1-week of additional content.

**Week 1** :- Introduction to Financial Accounting

**Week 2**:- A Closer Look at the Balance Sheet

**Week 3**:- Income Statement and Cash Flow Statement

**Week 4**:- Financial Statement Analysis – I

**Week 5**:- Financial Statement Analysis – II

**Week 6**:- Additional Content

### ABOUT INSTRUCTOR

Dr. Padmini Srinivasan is an Associate Professor, Finance & Accounting Area at the Indian Institute of Management Bangalore (IIMB). She is a Chartered Accountant and a Company Secretary by practice. She received her Ph.D. from the National Law School of India University. Her areas of expertise and interests include Financial Accounting, Financial Statement Analysis, Management Accounting and Corporate Governance and Accountability. She has varied professional interests in teaching, research and consulting in the areas of Financial Reporting, Management Accounting, Corporate Governance and accountability.





**JOSE PD**  
Professor, IIMB



**SAI YAYAVARAM**  
Professor, IIMB



**REGIE GEORGE PALLATHITTA**  
Professor, IIMB

**TYPE OF COURSE** : PG

**INTENDED AUDIENCE** : UG/PG

**PRE-REQUISITES** : None

**COURSE DURATION** : 5 weeks (1<sup>st</sup> June to 28<sup>th</sup> Dec 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 2

## OBJECTIVE OF COURSE

This course aims to equip you with a good understanding of:  
 What managing a firm strategically implies?  
 How one analyzes the industry in which a firm competes?  
 How does a firm create competitive advantage?  
 How does a firm sustain its competitive advantage?

## LEARNING OUTCOME

- Industry and competitive analysis
- Resource and competency analysis
- Analysing strategy across corporate and business levels



## COURSE PLAN

**Week 1:** INTRODUCTION TO STRATEGIC MANAGEMENT

**Week 2:** ANALYZING THE EXTERNAL ENVIRONMENT

**Week 3:** ANALYZING THE INTERNAL ENVIRONMENT

**Week 4:** COMPETITIVE POSITIONING

**Week 5:** MANAGING THE MULTI-BUSINESS FIRM

## ABOUT INSTRUCTOR

**Dr. P D Jose** is a Professor at the Indian Institute of Management Bangalore (IIMB), where he teaches core courses on Business and Corporate Strategy and several electives on Sustainability. Prior to joining IIMB, he was a member of the faculty at the Administrative Staff College of India, Hyderabad. He is a Fellow of the Indian Institute of Management Ahmedabad. He also has a Post Graduate Diploma in Forestry Management from the Indian Institute of Forest Management, Bhopal and Bachelors in Physics from the Institute of Science, Mumbai. He has taught classes on Strategy and Sustainability at a number of schools including Cardiff University Business School (UK), the School of Economics and Business at the University of Goteborg, Sweden and Indian Institute of Management at Kozhikode and Ahmedabad. He has also consulted for several government agencies, non-governmental, private sector and international organizations.

**Dr Rejie George Pallathitta** is an Associate Professor in the Corporate Strategy and Policy area at IIM Bangalore. He is a Ph.D. from Tilburg University in The Netherlands. Professor Pallathitta's interests are in the areas of Corporate Governance, Strategic Management and International Business. He has published papers in the Strategic Management Journal and the Journal of Business Research and has presented his research work at several international conferences.

**Dr Sai Yayavaram** is an Associate Professor at IIM Bangalore, where he teaches Competition & Strategy. He also conducts executive education programmes on strategic management and management of innovation for senior managers. He is a Ph.D. in Strategic Management from McCombs School of Business, The University of Texas at Austin and holds a Post Graduate Diploma in Management from the Indian Institute of Management, Ahmedabad. His research focuses on technology management, complexity and strategic rents and has been published in Administrative Science Quarterly, Strategic Management Journal and Organization Science.



**S G BADRINATH**

Professor, IIMB

**TYPE OF COURSE** : PG**INTENDED AUDIENCE** : UG/PG**COURSE DURATION** : 5 weeks (1<sup>st</sup> June to 28<sup>th</sup> Dec, 2018)**EXAM DATE** : December 2018**NO OF CREDITS** : 2**PRE-REQUISITES** : Introductory corporate finance, High school algebra**OBJECTIVE OF COURSE**

When you complete this course, you will become familiar with the general structure of primary and secondary equity markets from a domestic and international perspective. Beginning with introductory finance notions of risk and return, we examine qualitative concepts such as market efficiency and valuation.

These tools should enable you to build valuation models for common stocks. Through this process, you will also learn how professional financial analysts should evaluate companies. The course is suitable for students seeking eventual employment with a brokerage company, investment company or financial services company with responsibilities in evaluating and selecting equity securities for investment portfolios.

**LEARNING OUTCOME**

- To advance the understanding of fundamental concepts of financial markets and market participants.
- To explain the structure of global markets in which equities trade.
- To evaluate the economic and industry environment in which companies operate.
- To develop and employ tools of financial analysis for examining company fundamentals.
- To understand techniques for valuing equity securities.
- To link theories of valuation to practical aspects of investing.

**COURSE PLAN****WEEK 1:** INTRODUCING MARKETS, PARTICIPANTS AND PERFORMANCE**WEEK 2:** MARKET STRUCTURE**WEEK 3:** TRADING LOCATIONS AND PRACTICES**WEEK 4:** BASICS OF VALUATIONS**WEEK 5:** FUNDAMENTAL VALUATION ANALYSIS**ABOUT INSTRUCTOR**

Professor Badrinath is currently the Chairperson of the Centre for Capital Markets and Risk Management at IIM Bangalore. He is on leave from San Diego State where he teaches in the Investments and Risk Management areas. His Ph.D. is in Finance from the Krannert Graduate School of Management, Purdue University. He has a PGDM in Finance from IIMB, and an M.A from St. Stephen's College. His research has appeared in leading academic publications such as the Journal of Finance, The Journal of Financial Economics, The Review of Financial Studies, the Journal of Risk and Insurance, the Journal of Banking and Finance and the Journal of Business. Collectively, these papers have been cited several hundred times. Additionally, some of his research has been funded by the Fulbright Foundation, the U.S. Environmental Protection Agency and the Financial Executives Research Foundation. At Rutgers, he received college wide and University-wide teaching awards. At San Diego, he has received awards for Outstanding faculty and for Outstanding faculty contributions to the College of Business. He has served as the faculty advisor to the Aztec Equity Fund -- a student managed equity portfolio. He has also served as a consultant in cases involving utility rate setting and in anti-takeover legislation.



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## PROFESSOR SHAINESH

Professor, IIMB

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 5 weeks (1<sup>st</sup> July to 20th Dec, 2018)  
**EXAM DATE** : December 2018  
**NO OF CREDITS** : 2

**PRE-REQUISITES** : Familiarity with marketing concepts will be helpful.

### LEARNING OUTCOME

- The meaning and application of CRM
- Benefits of CRM to companies and consumers
- How to implement CRM best practices
- The importance of bonding and building loyalty with customers
- How to build long term customer relationships



### COURSE PLAN

**WEEK 1:** INTRODUCTION TO CRM

**WEEK 2:** BUILDING CUSTOMER RELATIONSHIPS

**WEEK 3:** ECONOMICS OF CRM

**WEEK 4:** Break week

**WEEK 5:** CRM APPLICATIONS

**WEEK 6:** CRM IMPLEMENTATION

### ABOUT INSTRUCTOR

Shainesh is Professor of Marketing at the Indian Institute of Management Bangalore. He has conducted research and teaching assignments at various universities abroad. His book titled Customer Relationship Management – A Strategic Perspective (Macmillan India) is a prescribed textbook for CRM courses at several business schools. He is also the co-author of a book on CRM titled Customer Relationship Management – Emerging Concepts, Tools and Applications (15th Reprint 2011, Tata McGraw Hill, New Delhi).



**DR. ASHIS MISHRA**

Professor, IIMB

**TYPE OF COURSE** : PG  
**INTENDED AUDIENCE** : UG/PG  
**PRE-REQUISITES** : None

**COURSE DURATION** : 5 weeks (1<sup>st</sup> July to 28th Dec, 2018)  
**EXAM DATE** : December 2018  
**NO OF CREDITS** : 2

**OBJECTIVE OF COURSE**

You will learn the theories of marketing through practice (examples and illustrations). This course will explain what marketing management is all about in the simplest of terms and lay the foundation to your pathway to excellence in the wonderful world of marketing.

**LEARNING OUTCOME**

- Basic concepts of marketing
- Segmentation, targeting, differentiation and positioning
- Marketing strategy
- 4Ps of marketing: product, price, place and promotion

**COURSE PLAN****WEEK 1:** WHAT IS MARKETING**WEEK 2:** SEGMENTATION AND TARGETING**WEEK 3:** DIFFERENTIATION AND POSITIONING**WEEK 4:** MARKETING STRATEGY - PRODUCT AND PRICE**WEEK 5:** MARKETING STRATEGY - PLACE AND PROMOTION**ABOUT INSTRUCTOR**

Dr. Ashis Mishra is a faculty member in the Marketing Area at the Indian Institute of Management Bangalore (IIMB). Dr. Mishra teaches marketing management and retail management. His area of research involves Retail Productivity Analysis, Retail Atmospherics and Retail Consumer Behaviour. He has successfully developed and applied many quantitative models and business model frameworks in solving marketing/retailing-related problems. He has published over 10 papers in various national and international journals of repute.



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**P D JOSE**

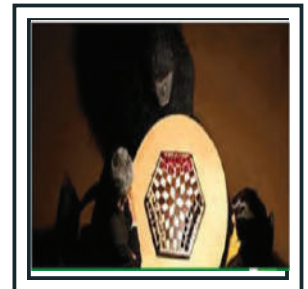
Professor, IIMB

**TYPE OF COURSE** : PG**INTENDED AUDIENCE** : UG/PG**COURSE DURATION** : 5 weeks**EXAM DATE** : December 2018**NO OF CREDITS** : 2

**PRE-REQUISITES** : No prior knowledge or experience is mandatory. However, prior exposure in the subject areas of management, especially strategic management will help you navigate through course easily.

**OBJECTIVE OF COURSE**

This course explores the emerging relationships between sustainability issues and competitive advantage. Building on the basic concepts of strategic management, this course will explore how managers may effectively deal with the sustainability challenges that they now encounter. By encouraging you to reflect on these issues using multiple case studies, discussions and interviews, we will aim to enhance your understanding of alternative models of strategy development in the context of sustainable development.

**LEARNING OUTCOME**

- The nature of the sustainability problems faced by businesses
- The business case for sustainability: Links between sustainability strategy and corporate performance
- How can firms integrate sustainability concerns into their business strategy? Which tools and techniques may be employed for this?
- Applied understanding of stakeholder management, non-market environment and issues/crisis management

**COURSE PLAN****Week 1:** WHAT IS SUSTAINABILITY AND WHY SHOULD STRATEGISTS CARE?**Week 2:** MANAGING STAKEHOLDERS**Week 3:** MANAGING SUSTAINABILITY RISKS**Week 4:** TRANSFORMING INTO SUSTAINABLE ENTERPRISE**Week 5:** THE ANARCHIST CORPORATION**ABOUT INSTRUCTOR**

P D Jose is a professor at the Indian Institute of Management Bangalore, where he teaches core courses on Business and Corporate Strategy and several electives on sustainability. He is a Fellow of the Indian Institute of Management Ahmedabad. He also has a Post Graduate Diploma in Forestry Management from the Indian Institute of Forest Management, Bhopal and Bachelor's in Physics from the Institute of Science, Bombay. He has taught classes on strategy and/or sustainability at a number of schools including Cardiff University Business School (UK); the School of Economics and Business at the University of Goteborg, Sweden; Indian Institute of Management at Kozhikode and Ahmedabad. He has also consulted with several government agencies, non-governmental, private sector and international organizations.



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All India Council for Technical Education



## Self-Paced (Article) Courses



MHRD



# Article Courses

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## UNIVERSITY OF DERBY

Professor & University of Derby

**TYPE OF COURSE** : School

**COURSE DURATION** : 6 weeks

**INTENDED AUDIENCE** : It is an open platform so anyone  
can enroll and consume the course.

**EXAM DATE** : NA

**NO OF CREDITS** : NA

### OBJECTIVE OF COURSE

This course will help you to improve the lives of people with dementia, adopting a person-centred and integrated approach. It is suitable for anyone interested in dementia or for those caring for people with dementia including partners, families and health and social care practitioners.



### LEARNING OUTCOME

Learner will have good command in this Subject.

### COURSE PLAN

**Week 01:** Communication and Compassing

**Week 02:** The Carer's voice

**Week 03:** Independence, control and Quality of Life

**Week 04:** Dementia as a Global Health Priority

**Week 05:** Integrating care

**Week 06:** End of life care

**Week 07:** Users of Information Retrieval

### ABOUT INSTRUCTOR

The objective of the entire course is to provide the learner an opportunity to get exposed to diverse disciplinary perspectives and concepts related to them. This will equip the learner to develop a holistic perspective on the subjects. Also it will guide the learner to choose the area(s) of specific interest for further learning.



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**PARTHA CHATTERJEE**

Assistant Professor &amp; SHIV NADAR UNIVERSITY

**TYPE OF COURSE** : UG**COURSE DURATION** : 1 weeks**INTENDED AUDIENCE** : It is an open platform so anyone can enroll and consume the course.**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : It is an open platform so anyone can enroll and consume the course.**OBJECTIVE OF COURSE**

This module introduces the basic of naïve set theory. This allows us to develop a language that can be used to understand various concepts of Logic. This module is of two hours. Students should go through the lecture notes and try to answer the questions provided in the question bank. When students are satisfied with their understanding of the material, then can take the quiz to test their understanding.

**LEARNING OUTCOME**

Learner will have good command in this Subject.

**COURSE PLAN**

**Week 01:** Set Theory

**Week 02:** Set Theory

**ABOUT INSTRUCTOR**

Ashokankur Datta Assistant Professor Department of Economics, School of Humanities and Social Sciences Email Contact:

[ashokankur.datta@snu.edu.in](mailto:ashokankur.datta@snu.edu.in)

Education Details:

Ph.D. (Economics), Indian Statistical Institute, Delhi. 2012.

M.A. (Economics), University of Delhi. 2005

B.Sc. (Economics-Honours.), University of Calcutta. 2003





**SUPRIYA CHAUDHURI**  
Professor & Jadavpur University

**TYPE OF COURSE** : UG **COURSE DURATION** : 2 weeks  
**INTENDED AUDIENCE** : It is an open platform so anyone can enroll and consume the course. **EXAM DATE** : NA  
**PRE-REQUISITES** : It is an open platform so anyone can enroll and consume the course. **NO OF CREDITS** : NA

#### OBJECTIVE OF COURSE

Course on Evolution of Film Form and Digital Culture

#### LEARNING OUTCOME

Learner will have good command in this Subject.

#### COURSE PLAN

**Week 01:** Evolution of film form

**Week 15 :** Digital Cultures



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**PRABHAKAR RAO JANDHYALA**

Professor &amp; University of Hyderabad

**TYPE OF COURSE** : UG**COURSE DURATION** : 4 weeks**INTENDED AUDIENCE**: It is an open platform so anyone can enroll and consume the course.**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : It is an open platform so anyone can enroll and consume the course.**OBJECTIVE OF COURSE**

This module introduces the basic of naïve set theory. This allows us to develop a language that can be used to understand various concepts of Logic. This module is of two hours. Students should go through the lecture notes and try to answer the questions provided in the question bank. When students are satisfied with their understanding of the material, then can take the quiz to test their understanding.

**LEARNING OUTCOME**

Learner will have good command in this Subject.

**COURSE PLAN****Week 01:** Anthropological Perspectives on Environment 1**Week 02:** Anthropological Perspectives on Environment 2**Week 03:** Anthropological Perspectives on Environment 3**Week 04:** Anthropological Perspectives on Environment 4

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**SRIVIDHAR MELUKOTE**  
Professor & Swami Vivekananda Yoga  
Anusandhana Samsthan

<b>TYPE OF COURSE</b>	: Certificate	<b>COURSE DURATION</b>	: 12 weeks (01/08/2018 & 31/10/2018)
<b>INTENDED AUDIENCE</b>	: It is an open platform so anyone can enroll and consume the course.	<b>EXAM DATE</b>	: To be announced
<b>PRE-REQUISITES</b>	: It is an open platform so anyone can enroll and consume the course.	<b>NO OF CREDITS</b>	: 4

### OBJECTIVE OF COURSE

The course contains Message of Vedas And Upanishads, the Four Streams of Yoga, Shaddarshanas or the SIX systems of Indian Philosophy, Introduction to Hatha Yoga and Patanjali Yoga Sutras. It also includes Life and message of spiritual masters and Indian Culture. In Applications of Yoga, topics covered include Anatomy and Physiology, Yoga and Exercise Physiology, Concept of Health, both yogic and modern scientific, Yogic Concept Of Health & Disease Principles of Healthy Living, Effect of Diet and Yogic Concept of Diet in Therapeutic Situations, Yoga, Education and Research, Yoga and Stress Management and Yoga and Mental Health.



### LEARNING OUTCOME

Learner will have good command in this Subject.

### COURSE PLAN

**Week 01:** Message of Vedas and Upanishads (ALL WEEKS)

### ABOUT INSTRUCTOR

- Dean of Academics and Dean, Division of Yoga and Humanities, S-VYASA, Bengaluru Registrar of Karnataka Samskrit University, Chamarajapet, Bangalore (June 07, 2014 to December 06, 2015).
- Deputy Director, Publications wing, Karnataka Samskrit University (March 2012 – July 2013) Fullbright Scholar (2000) with South Carolina University, USA (selected by the Indian and US Governments).
- Assistant Professor of Hinduism and Indian Philosophy at Hindu University of America, Orlando (2004 and 2005).
- Adjunct Professor at Union University, Cincinnati, USA (2005-07).



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## INTERNATIONAL YOUTH FELLOWSHIP

Professor & International Youth Fellowship

<b>TYPE OF COURSE</b>	: Certificate	<b>COURSE DURATION</b>	: 7 weeks
<b>INTENDED AUDIENCE</b>	: It is an open platform so anyone can enroll and consume the course.	<b>EXAM DATE</b>	: NA
<b>PRE-REQUISITES</b>	: It is an open platform so anyone can enroll and consume the course.	<b>NO OF CREDITS</b>	: NA

### OBJECTIVE OF COURSE

In an increasingly globalised world, to stay ahead of competition and succeed, mere knowledge and skill no more suffices. The Mind Education Course aims at creating global leaders in every field who possess the special wisdom that others do not have thereby making them singular individuals who will be much in demand internationally. We wish to mould such leaders who possess the mindset of 'You First' instead of 'Me First'. In every field whether it be education, IT, Medicine etc. such leaders are direly needed. This is why the mind education lectures educate the hearts of people to learn the value of self-control and happiness, creating a much better environment in the class or workplace and building leaders with bright & clean hearts.



### LEARNING OUTCOME

Learner will have good command in this Subject.

### COURSE PLAN

- Week 01:** Importance and necessity of mind education
- Week 02:** Knowledge based education and wisdom based education
- Week 03:** Desires and self control
- Week 04:** Wounds of the heart: Causes and cure
- Week 05:** Listening: Wisdom to gain hearts
- Week 06:** Thinking Power -Importance and necessity of contemplating
- Week 07:** Change in perspective

### ABOUT INSTRUCTOR

Prof. Kim Soo Yeon is the Director of International Youth Fellowship, India. And he is also a Mind Education Specialist. He has been a speaker at various events such as the Atlanta Citizen Camp, USA, National Youth Camp, Burundi, Educational Ministry camp in Zambia. He was also one of the main speakers at the 17th National Jamboree, Karnataka. He has been invited to deliver mind education lectures at the Dept of Prohibition & Excise Office, Telangana, and Dept. of Income Tax (Exemptions) Delhi. He has made significant contribution to the development of youth through his lectures on mindset education at various colleges and universities all over India.



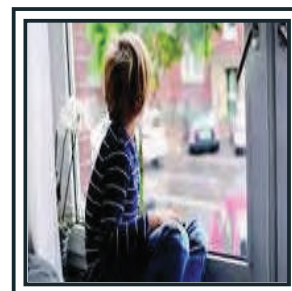


**UNIVERSITY OF DERBY**  
Professor & University of Derby

**TYPE OF COURSE** : Certificate **COURSE DURATION** : 6 weeks  
**INTENDED AUDIENCE** : It is an open platform so anyone can enroll and consume the course. **EXAM DATE** : NA  
**PRE-REQUISITES** : It is an open platform so anyone can enroll and consume the course. **NO OF CREDITS** : NA

**OBJECTIVE OF COURSE**

This course was developed by the University of Derby to help raise awareness and encourage communication and education about autism, Asperger's and ADHD. One of the most common childhood conditions, ADHD can continue through adolescence and into adulthood (NICE, 2013). In the UK alone, around 700,000 people are on the autism spectrum (National Autism Society,2016).



**LEARNING OUTCOME**

Learner will have good command in this Subject.

**COURSE PLAN**

Here the course coordinator has to provide the brief course plan covered in the week Example :

- Week 01:** Symptoms of ADHD
- Week 02:** what is autism
- Week 03:** How are psychiatric diagnoses made?
- Week 04:** Theorising about causation
- Week 05:** What is comorbidity?
- Week 06:** Early interventions

**ABOUT INSTRUCTOR**

This course has been developed by the University of Derby. The University has campuses. in Derby and across the English country Derbyshire.  
 The University of Derby Online Learning is the thriving distance learning division of the University of Derby.

Since 2001, the University of Derby has offered online distance learning to students who require more-flexible study options. As demand for these popular online distance learning courses increased, we learned to tailor course content specifically for online delivery. In 2011, based on the increasing success of our distance learning courses, we launched University of Derby Online Learning (UDOL).



**DR VIKAS RAWAT**

Professor & Swami Vivekananda Yoga  
Anusandhana Samsthan

<b>TYPE OF COURSE</b>	: Certificate	<b>COURSE DURATION</b>	: 12 weeks (01/08/2018 & 31/10/2018)
<b>INTENDED AUDIENCE</b>	: It is an open platform so anyone can enroll and consume the course.	<b>EXAM DATE</b>	: To be announced
<b>PRE-REQUISITES</b>	: It is an open platform so anyone can enroll and consume the course.	<b>NO OF CREDITS</b>	: 4

**OBJECTIVE OF COURSE**

Preparatory practices including Sukshma Vyayama, Breathing Exercises, Loosening Practices, Suryanamaskara or Sun Salutation, Asanas, Kriyas, Bandhas, Mudras, Pranayama, Dhyana or Meditation, chanting of shlokas, bhajans and patriotic songs and activities such as krida yoga, karma yoga activities, ananda sabha or happy assembly including presentations and skits, dramas and many more such activities which help a yoga practitioner grow from tamas to rajas to sattva and eventually to gunaathita sthiti or attainment.

**LEARNING OUTCOME**

Learner will have good command in this Subject.

**COURSE PLAN**

**Week 01:** Sukshma Vyayama

**ABOUT INSTRUCTOR**

Dr Vikas Rawat, Phd, is an Assistant Professor, Level 2 at S-VYASA University. He has been doing sadhana for more than 10 years at Prashanti Kutiram, the campus of S-VYASA.



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**DR BALARAM PRADHAN**  
Professor & Swami Vivekananda Yoga  
Anusandhana Samsthan

<b>TYPE OF COURSE</b>	: Certificate	<b>COURSE DURATION</b>	: 12 weeks (01/08/2018 & 31/10/2018)
<b>INTENDED AUDIENCE</b>	: It is an open platform so anyone can enroll and consume the course.	<b>EXAM DATE</b>	: To be announced
<b>PRE-REQUISITES</b>	: It is an open platform so anyone can enroll and consume the course.	<b>NO OF CREDITS</b>	: 4

### OBJECTIVE OF COURSE

Preparatory practices including Sukshmvayama, Breathing Exercises, Loosening Practices, Suryanamaskara or Sun Salutation, Asanas, Kriyas, Mudras, Pranayama, Dhyana or Meditation, chanting of shlokas, bhajans and patriotic songs and activities such as krida yoga, karma yoga activities, ananda sabha or happy assembly including presentations and skits, dramas and many more such activities which help a yoga practitioner grow from tamas to rajas to sattva and eventually to gunaathita sthiti or attainment.

### LEARNING OUTCOME

Learner will have good command in this Subject.

### COURSE PLAN

**Week 01:** Sukshma Vyayama (ALL WEEKS)

### ABOUT INSTRUCTOR

Dr Balaram Pradhan, Phd, is an Assistant Professor, Level 2 at S-VYASA University. He has been doing sadhana for more than 15 years at Prashanti Kutiram, the campus of S-VYASA.



**DR KASHINATH MHETRE**

Professor & Swami Vivekananda Yoga  
Anusandhana Samsthan

<b>TYPE OF COURSE</b>	: Certificate	<b>COURSE DURATION</b>	: 12 weeks (01/08/2018 & 31/10/2018)
<b>INTENDED AUDIENCE</b>	: It is an open platform so anyone can enroll and consume the course.	<b>EXAM DATE</b>	: To be announced
<b>PRE-REQUISITES</b>	: It is an open platform so anyone can enroll and consume the course.	<b>NO OF CREDITS</b>	: 4

**OBJECTIVE OF COURSE**

Preparatory practices including Sukshma Vyayama, Breathing Exercises, Loosening Practices, Suryanamaskara or Sun Salutation, Asanas, Kriyas, Mudras, Pranayama, Dhyana or Meditation, chanting of shlokas, bhajans and patriotic songs and activities such as krida yoga, karma yoga activities, ananda sabha or happy assembly including presentations and skits, dramas and many more such activities which help a yoga practitioner grow from tamas to rajas to sattva and eventually to gunaathita sthiti or attainment.

**LEARNING OUTCOME**

Learner will have good command in this Subject.

**COURSE PLAN**

**Week 01:** Sukshma Vyayama (ALL WEEKS)

**ABOUT INSTRUCTOR**

Dr Kashinath Mhetre, MD (Yoga and Rehabilitation), Phd (Yoga), is an Assistant Professor, Level 2 at S-VYASA University. He has been doing sadhana for more than 8 years at Prashanti Kutiram, the campus of S-VYASA.





Consortium for  
Educational Communication

## Non-Technology Under-Graduate Courses



MHRD

सत्यमेव जयते



# Arts Literature and Language Courses

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## DR. BABU M. N

Asst Professor, Department of Philosophy, Sree Sankaracharya  
University of Sanskrit, Kalady, Kerala

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (July 30 to Oct 27, 2018)

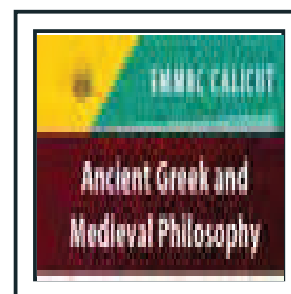
**EXAM DATE** : November 12, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Those who passed Plus two

### OBJECTIVE OF COURSE

- Students will learn to recognize, understand and interpret philosophical concepts which were developed by great philosophical Schools.
- Students closely analyze and engage, read and write with original philosophical texts.
- They can understand and evaluate the rational inquiry of Medieval thinkers on religious philosophy
- They consider the important relevant ideas and methods of great Greek philosophers, especially Socrates and take the ideas of philosophy to their own thinking



### LEARNING OUTCOME

The course enables the students to master all the basic ideas of Classical Greek and Medieval philosophy. This is a part of approved curriculum for B. A. Philosophy Course of University of Calicut that can be applicable in all Indian Universities. The purpose of this course is to study the important concepts in Ancient and Medieval philosophy. We will concentrate on the dominant figures of philosophy, and their thought on cosmology, metaphysics, epistemology, logic, ethics, and religion.

### COURSE PLAN

**Week 01:** 1. History of Greek Philosophy, 2. Greek School Of Thought, 3. Pre-Socratic Philosophy

**Week 02:** 4. Pre-Socratic Thinkers- the Ionian, 5. Thales of Miletus, 6. Anaximander

**Week 03:** 7. Anaximenes, 8. Pythagoras, 9. Heraclitus

**Week 04:** 10. Parmenides, 11. Zeno, 12. Anaxagoras

**Week 05:** 13. Leucippus, 14. Democritus, 15. The Sophist Philosophy

**Week 06:** 16. Protagoras, 17. Socrates' theory of knowledge, 18. Socrates' method

**Week 07:** 19. Plato's theory of knowledge, 20. Doctrine of Ideas/ forms, 21. Concept of the soul

**Week 08:** 22. Aristotelian Epistemology, 23. Logic, 24. Substance, matter and form

**Week 09:** 25. The process of Change: The Four Causes, 26. Nicomachean ethics, 27. Epicureanism

**Week 10:** 28. Stoicism, 29. A Historical Overview of Medieval Philosophy, 30. Features and Characteristics of Medieval Philosophy

**Week 11:** 31. Major Phases and Important Thinkers of Medieval Philosophy, 32. Central Themes and Philosophical Concerns of Medieval Philosophy, 33. Medieval Philosophers: Boethius, 34. Medieval Philosophers: Anselm of Canterbury, 35. Great Medieval Philosophers: St. Augustine of Hippo, 36. Medieval Philosophers: Saint Thomas Aquinas

**Week 12:** Evaluation

### ABOUT INSTRUCTOR

- PhD, May 2006, Univ. of Calicut, Dept. of Philosophy,
- PhD thesis : A Study on Heidegger's Thinking and Hermeneutical Phenomenology
- M.Phil, May 1992, Pondicherry Central University, Dept. of Philosophy M.Phil thesis Heidegger's Treatment of Thinking.
- M .A Philosophy, 1991, University of Calicut, Dept. of Philosophy University Campus
- B.A Philosophy, 1988, Sree Kerala Varma college, Thrissur







**DR. M. RAMAKRISHNAN**  
Visiting Professor at the International Centre for Spiritual Studies,  
Amrita Vishwa Vidyapeetham, Kollam, Kerala.

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (July 9, 2018 to Sep. 30, 2018)

**EXAM DATE** : 15 October , 2018

**NO OF CREDITS** : 4

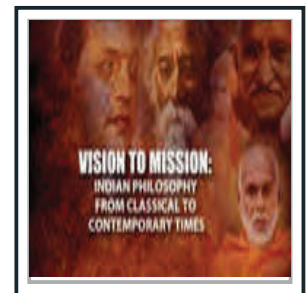
**PRE-REQUISITES** : Pass in Plus two or equivalent course

### OBJECTIVE OF COURSE

- The main aim is to enable the learners to analyze and synthesize the developments in the philosophical thinking and system building in India pertaining to the classical and contemporary times.
- The modules in this course cover a variety of topics including the philosophical heritage of ancient India, the systems of thought and their practical applications in the contemporary socio-economic and cultural context of modern India.

### LEARNING OUTCOME

- Develop close familiarity with the developments in classical and contemporary Indian Philosophy
- Trace the positive transition in Indian philosophy from the ancient to modern times
- Analyze and synthesize the developments in the philosophical thinking and system building in India pertaining to the classical and contemporary times
- Create the awareness of the philosophers' task of leading India into a glorious future



### COURSE PLAN

**Week 01:** Introduction To Philosophical Studies- Part-I, Introduction To Philosophical Studies- Part-II, The Salient Features Of Indian Philosophy

**Week 02:** Origin and development of Philosophy in India, Carvaka Materialism, Nyaya – Vaiśeṣika

**Week 03:** Samkhya Theory Of Evolution, Jainism – Epistemology, Ethics And Atheism, Jainism Metaphysics: Substance And Jiva

**Week 04:** Jainism – Ajiva, Syad Vada and Anekanta Vada, Buddhism Part I, Buddhism – Part II

**Week 05:** Vedanta Part – I, The Vedanta Part II - The Upanishads, The Upanishads – Brahman

**Week 06:** Introduction To Contemporary Indian Philosophy, Humanism, Neo-Vedanta

**Week 07:** Swami Vivekananda, Freedom And Equality - Swami Vivekananda, State, Nationalism, Freedom And Society - Rabindranath Tagore

**Week 08:** Sri. Aurobindo Evolution And Involution, Integral Yoga - Sri Aurobindo, Nationalism And Human Unity – Sri Aurobindo

**Week 09:** Mahatma Gandhi Part I, Mahatma Gandhi Part II, Social and Ethical Issues of Sarvodaya

**Week 10:** Globalization, Exploitation by Domination, Political Issues: Terrorism, Violence and War, M. N. Roy- The Philosophy of New Humanism

**Week 11:** B. R. Ambedkar: Crusade Against Casteism, B. R. Ambedkar: The Ideal Of Constitutional Democracy, Sree Narayana Guru: Vedanta For Human Liberation

**Week 12:** Sree Narayana Guru: Crusade Against Casteism, Contemporary Indian Philosophy as a Critique of Social Reality, Classical and Contemporary Indian Philosophy - Vision and Mission

### ABOUT INSTRUCTOR

- Former Head of the Department of Philosophy, Govt. Brennen College, Thalassery, Kerala.
- Presently Visiting Professor at the International Centre for Spiritual Studies, Amrita Vishwa Vidyapeetham, Kollam, Kerala.
- PhD in Philosophy. Post-doctoral research as Associate of the Indian Institute of Advanced Study, Shimla and as a National Fellow of the Indian Council of Philosophical Research.
- Completed UGC Minor Project on 'Production and Evaluation of Computational Teaching Modules for Philosophy of Values'.
- Authored books in English and Malayalam. Contributed articles to anthologies on philosophical themes. Also published and presented many research papers in various journals and conferences.





**DR. P. K. SASIDHARAN**  
Associate Professor in Philosophy.  
Sree Sankaracharya University of Sanskrit, Kalady.  
Kerala.

**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 16 weeks (July 16 to Nov 3, 2018)  
**EXAM DATE** : November 14, 2018  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : Students who passed Plus Two

### OBJECTIVE OF COURSE

To give a detailed exposure to every stream of thoughts and authors in the modern and contemporary western philosophy, with sufficient background informations on the pre-modern philosophical developments.

### LEARNING OUTCOME

A successful learning will be able to keep track of each and every trends in the history of modern and contemporary western philosophy.

### COURSE PLAN

- Week 01:** 1. Introduction to Philosophical Studies, 2. Introduction to Philosophy – Metaphysics – Themes And Concerns, 3. Introduction to Philosophy-Epistemology
- Week 02:** 4. Rene Descartes, 5. Philosophical Methods-Cartesian Method, 6. Interactionism
- Week 03:** 7. Psycho-physical Parallelism, 8. Spinoza, 9. Doctrine of Modes
- Week 04:** 10. The Doctrine of Substance, 11. Leibniz – The Doctrine of Substance, 12. Leibniz – Pre-established Harmony
- Week 05:** 13. Leibniz – Doctrine of Monads, 14. Empiricism, 15. John Locke
- Week 06:** 16. Rejection of Innate ideas, 17. Simple and complex ideas, 18. Primary and secondary qualities
- Week 07:** 19. George Berkely, 20. Rejection of Abstract Ideas, 21. Esse ist Percipi
- Week 08:** 22. Rejection of matter, 23. Subjective idealism, 24. David Hume
- Week 09:** 25. Association of Ideas, 26. Theory of causation, 27. Scepticism
- Week 10:** 28. Immanuel Kant, 29. Kant's Epistemology, 30. Immanuel Kant's Analytic of Principles
- Week 11:** 31. George Wilhelm Friedrich Hegel, 32. Hegel – The Real is Rational and the Rational is Real, 33. Absolute Idealism of Hegel
- Week 12:** 34. Marxian Dialectical Method, 35. Features of Dialectical Method, 36. An Introduction to Existentialism
- Week 13:** 37. Nietzsche And Existential Philosophy, 38. Existential Philosophy of Jean-Paul Sartre, 39. An Introduction to Phenomenology
- Week 14:** 40. Phenomenology, 41. History of Ideas Leading Up To Intentionality: From Aristotle in Antiquity to Ockham in The Middle Ages, 42. Intentionality
- Week 15:** 43. Philosophical Skepticism And Its Contributions To The Development of Intentionality, 44. Early Analytical Philosophy Of Language, 45. Logical Positivism – An Introduction
- Week 16:** 46. Central Tenets Of Logical Positivism, 47. Logical Positivism – Verifiability Principle, 48. Pragmatism – Origins And Concept



### ABOUT INSTRUCTOR

- Mphil (1990) and PhD (1996) in Philosophy, from Madras University and Calicut University respectively
- Specialised in the area of twentieth century analytic philosophy
- At present engaged in theorising cultural practices, and cultural Buddhism.

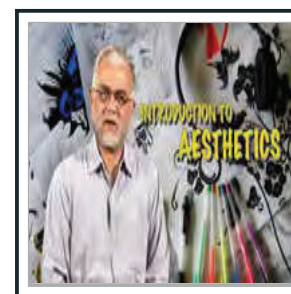


**PROF. M. V. NARAYANAN**

Professor, Department of English, University of Calicut

**TYPE OF COURSE** : UG**INTENDED AUDIENCE** : UG**COURSE DURATION** : 13 weeks (July 16 to Nov 9, 2018)**EXAM DATE** : November 18, 2018**NO OF CREDITS** : 4**PRE-REQUISITES** : Pass in plus two or equivalent**OBJECTIVE OF COURSE**

Develop a historical understanding of different theories, theoreticians and concepts in Aesthetics; Create an awareness of the artistic and historical contexts of different aesthetic theories; Develop knowledge of the interfaces between aesthetic theories and artistic practice; Create a grasp of the different trends in the field of aesthetics and their connections with artistic movements; Develop an analytical perspective towards different artistic movements and practices in the light of aesthetic theories; Create an understanding of the basic principles that inform art criticism; Develop an understanding of the connections between aesthetics and new/contemporary socio-political perspectives on art.

**LEARNING OUTCOME**

- Familiarity with the history and development of the field of Aesthetics;
- Understanding of the basic principles that inform art criticism;
- Historical understanding of different theories and concepts in Aesthetics and their connections/associations with one another;
- Historical understanding of different schools of thought and of specific art movements, artists and practices.

**COURSE PLAN****Week 01:** 1. Introduction to Aesthetics - 1, 2. Introduction to Aesthetics – 2, 3. Classical & Western Aesthetics – Plato**Week 02:** 4. Classical & Western Aesthetics - Aristotle, 5. Classical & Western Aesthetics - Byzantine Art, 6. Classical & Western Aesthetics - Early Christian Art**Week 03:** 7. Classical & Western Aesthetics - Romanesque Art, 8. Modern Aesthetics- Kant 1, 9. Modern Aesthetics- Kant 2, 10. Modern Aesthetics – Hegel**Week 04:** 11. Modern Aesthetics – Romanticism, 12. Modern Aesthetics – Formalism, 13. Modern Aesthetics - Expressionism**Week 05:** 14. Modern Aesthetics – Existentialism, 15. Modern Aesthetics – Surrealism, 16. Modern Aesthetics – Cubism**Week 06:** 17. Modern Aesthetics – Dadaism, 18. Modern Aesthetics – Realism, 19. Modern Aesthetics - Fauvism, 20. Late Modernist Aesthetics – Abstract Art**Week 07:** 21. Late Modernist Aesthetics – Marxist Aesthetics, 22. Late Modernist Aesthetics – Feminist Aesthetics, 23. Late Modernist Aesthetics – Frankfurt School**Week 08:** 24. Late Modernist Aesthetics – Cultural Studies, 25. Late Modernist Aesthetics - Psychoanalysis, 26. Late Modernist Aesthetics – Postmodernism**Week 09:** 27. Late Modernist Aesthetics – Contemporary Aesthetics, 28. Non-western Traditions of Aesthetics – Aesthetics of Indian Miniature Tradition, 29. Non-western Traditions of Aesthetics – Mughal Art**Week 10:** 30. Non-western Traditions of Aesthetics – Egyptian Art 1, 31. Non-western Traditions of Aesthetics – Egyptian Art 2, 32. Non-western Traditions of Aesthetics – Egyptian Art 3**Week 11:** 33. Non-western Traditions of Aesthetics – Far Eastern Art – Japan, 34. Non-western Traditions of Aesthetics – Far Eastern Art – Chinese Art, 35. Non-western Traditions of Aesthetics – Far Eastern Art – Korea & South East Asia**Week 12:** End-term discussion/interaction, End-Term Assessment**Week 13:** Final Examination**ABOUT INSTRUCTOR**

English Professor at the University of Calicut. Ph.D. from University of Exeter, UK, and has taught at the University of Sharjah, Miyazaki International University, Japan, and the University of Calicut. Major areas of research are Cultural Studies, Theatre & Performance and traditional Indian Theatre. He has been on the curatorial committees of the International Theatre Festival of Kerala and the Ekaharya Solo Theatre Festival and has done extensive documentation of Kathakali and Kutiyattam in association with UNESCO, CDIT, and VEDIKA.



**DR. HARISH CHANDRA TIWARI**Associate Professor, Uttarakhand Sanskrit University,  
Haridwar, Uttarakhand**DR. PRAKASH CHANDRA PANT**Assistant Professor, Uttarakhand Sanskrit University,  
Haridwar, Uttarakhand**TYPE OF COURSE : UG**  
**INTENDED AUDIENCE : UG****COURSE DURATION : 6 weeks (8/6/2018 to 11/18/2018)**  
**EXAM DATE : Approximately 10 days after completion of the course****PRE-REQUISITES : उत्तरमाध्यमिककक्षायाम् 10+2****NO OF CREDITS : 6**

द्विसंस्कृतमेकविषयमादाय उत्तीर्णः संस्कृतभाषायांभाषणेबोधने च समर्थः छात्राः छात्रा वा पाठ्यक्रमेभागंस्वीकर्तुं शक्नोति ।

**OBJECTIVE OF COURSE**

सी.बी.सी.एस.इत्याधरितोयिम् षष्ठपत्रपबंसै नतअमल वी दौतपत्र स्पजमतंजनतमः ,संस्कृतसाहित्यस्य समालोचनात्मकसर्वेक्षणम्द्व इतिनामकःपाठ्यक्रमः स्नातक/बी.ए. कक्षायाःद्वितीयसत्रास्य कृतेविद्यते । अस्य पाठ्यक्रमस्य उद्देश्यमस्ति सरसतया सरलतया च संस्कृतानुरागिणां जिज्ञासूनां छात्राणां वैदिकसाहित्य-रामायण-महाभारत-पुराण-व्याकरण-दर्शन-साहित्यादिग्रन्थाध्ययने अभिमुखीकरणम् । अस्य पाठ्यक्रमस्य यथाविधि अध्ययनेन जिज्ञासवः छात्राः अल्पेनैव प्रयासेन संस्कृतभाषायां निब(नां) ग्रन्थानां प्रमुखसि(न्तान्) ज्ञातुं सक्षमास्तु भविष्यन्त्येव सहैव अमूल्यसि(न्तरत्नाकराणां) संस्कृतग्रन्थानाम् अध्ययने गवेषणे च सहजतया प्रवृत्ता अपि भविष्यन्ति ।

**LEARNING OUTCOME**

अस्य पाठ्यक्रमस्य उद्देश्यमस्ति सरसतया सरलतया च संस्कृतानुरागिणां जिज्ञासूनां छात्राणां वैदिकसाहित्य-रामायण-महाभारत-पुराण-व्याकरण-दर्शन-साहित्यादिग्रन्थाध्ययने अभिमुखीकरणम् । अस्य पाठ्यक्रमस्य यथाविधि अध्ययनेन जिज्ञासवः छात्राः अल्पेनैव प्रयासेन संस्कृतभाषायां निब(नां) ग्रन्थानां प्रमुखसि(न्तान्) ज्ञातुं सक्षमास्तु भविष्यन्त्येव सहैव अमूल्यसि(न्तरत्नाकराणां) संस्कृतग्रन्थानाम् अध्ययने गवेषणे च सहजतया प्रवृत्ता अपि भविष्यन्ति । पाठ्यक्रमस्य सफलसमाप्तेरनन्तरं छात्राः स्नातकोपाधि तुल्यन्त एव सहैव अन्यप्रतियोगिपरीक्षास्वपिसाफ्रफल्यं लप्स्यन्ते ।

**COURSE PLAN****Week 01:- Vaidic Samhita\_Episode – (1,2,3,4)****Week 02:- Vaidic Samhita\_Episode – (5,6,7,8)****Week 03:- Vaidic Samhita\_Episode – (9,10,11)****Week 04:- Brahmangrantha\_Episode (1,2,3,4,5)****Week 05:- Aranyak &Upnishad\_Episode (1,2,3,4,5)****Week 06:- Aranyak &Upnishad\_Episode (6,7)**

Vedanga (Brief Introduction) – 1,2

**Week 07:- Ramayana\_Episode (1,2,3,4)****Week 08:- Ramayana\_Episode (5,6,7)****Week 09:- Mahabharata\_Episode (1,2,3,4)****Week 10:- Puranas -1\_Episode (1,2,3)****Week 11:- Puranas -1\_Episode (4,5,6)****Week 12:- General Introduction to Vyakaranasastra\_Episode (1,2)**

General Introduction to Darshana\_Episode (1,2)

**Week 13:- General Introduction to Darshana\_Episode (3,4,5,6)****Week 14:- General Introduction to Poetics\_Episode (1,2,3)****Week 15:- General Introduction to Poetics\_Episode (4,5,6)****ABOUT INSTRUCTOR**

- डॉ. हरीशचन्द्रतिवाड़ी सम्प्रति हरिद्वारस्थ-उत्तराखण्डसंस्कृतविश्वविद्यालयस्य साहित्यविभागे सहाचार्यो(ध्यक्ष) विद्यते ।
- अयं वाराणसीस्थसम्पूर्णानन्दविश्वविद्यालये गुरुपरम्परया शिक्षां लब्ध्वा दिसम्बर 2006 तः अगस्त 2016 यावत् उत्तरप्रदेशीयमैनपुरीजनपदस्थे श्रीएकरसानन्द-आदर्शसंस्कृतमहाविद्यालये सहायकाचार्यसाहित्यपदे प्रभारिप्राचार्यपदे च कार्यं कृतवान् ।
- ततः परम् अगस्त 2011 तः अगस्त 2016 यावत् नवदेहलीस्थराष्ट्रीयसंस्कृतसंस्थानस्य मानितविश्वविद्यालयस्य जयपुरपरिसरे साहित्यविभागे सहायकाचार्यपदे अध्यापनं कृतवान् ।
- अनेन प्रणीताः नैके शोधलेखाः, पाठाः, सम्पादिता नैकाःपत्रिकादयश्च सन्ति प्रकाशिताः ।
- विविधासु राष्ट्रियसङ्घीषु शोधपत्रण्यपि अनेन पठितान्यभवन् ।
- साम्प्रतमयं साहित्य-व्याकरण-दर्शनादीनि शास्त्राणि आश्रित्य अध्ययने(ध्यापने) च प्रवर्तते ।





## PROF. PIYUSHKANT DIXIT

VC, Uttarakhand Sanskrit University, Haridwar,  
Uttarakhand

**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 5 weeks (8/6/2018 to 4/11/2018)  
**EXAM DATE** : 15/11/2018 (TENTATIVE)  
**NO OF CREDITS** : 6

**PRE-REQUISITES** : उत्तरमाध्यमिककक्षायाम् (10+2) संस्कृतम् एकं विषयमधिकृत्य उत्तीर्णः एवं च उत्तरमाध्यमिकस्तरीयसंस्कृतव्याकरणस्य सामान्यरूपेण ज्ञाने समर्थः छात्रः अत्रार्हः ।

### OBJECTIVE OF COURSE

CBCS इत्याधारितोऽयं Classical Sanskrit Literature (Drama) इति नामकः पाठ्यक्रमः स्नातककक्षायाः (प्रतिष्ठायाः) तृतीयसत्रपूरकः अर्थात् बी. ए. (ऑनर्स) इत्यस्याः तृतीयसत्रस्य कृते वर्तते । अत्र अध्यापनसंरचनादिविषयकम् एतत्सम्बद्धान्यविषयकं च शिक्षणं बोधनं वा पाठ्यक्रमे निर्धारितग्रन्थानुसारं भविष्यति ।

### LEARNING OUTCOME

- पाठ्यक्रमस्य सफलसमाप्तेरनन्तरं छात्राः निर्धारितपाठ्यक्रमानुसारं तत्सम्बद्धान्यविषयांश्च सम्यग् ज्ञातुं प्रयोक्तुं च समर्थाः भविष्यन्ति ।
- अयं पाठ्यक्रमः स्नातकक्षायां पठतां छात्राणां कृते तु वर्तते एव, स्नातककक्षां समुत्तीर्णानाम् अन्यप्रतियोगिपरीक्षायाः सन्नद्धतां कुर्वाणानां जिज्ञासूनां छात्राणां च कृतेऽपि उपयोगी भविष्यति ।



### COURSE PLAN

- Week 01:-** Svapnavasavadattam- Bhasa Act I & VI\_Episode(1,2,3,4)
- Week 02:-** Svapnavasavadattam- Bhasa Act I & VI\_Episode (5,6,7,8,9)
- Week 03:-** Svapnavasavadattam- Bhasa Act I & VI\_Episode (10,11,12,13,14)
- Week 04:-** Abhijnannasakuntalam-Kalidasa I & IV\_Episode (1,2,3,4,5)
- Week 05:-** Abhijnannasakuntalam-Kalidasa I & IV\_Episode (6,7,8,9)
- Week 06:-** Abhijnannasakuntalam-Kalidasa I & IV\_Episode (10,11,12,13,14)
- Week 07:-** Mudraraksasam- Visakhdatta - I\_Episode (1,2,3)
- Week 08:-** Mudraraksasam- Visakhdatta - I\_Episode (4,5,6)
- Week 09:-** Mudraraksasam- Visakhdatta - II\_Episode (1,2,3,4)
- Week 10:-** Mudraraksasam- Visakhdatta - III\_Episode (1,2,3,4,5)
- Week 11:-** Sanskrit Drama – 1\_Episode (1,2,3,4)
- Week 12:-** Some important dramatists and Dramas – 1 Episode (1,2,3,4)
- Week 13:-** Some important dramatists and Dramas – 1 Episode (5,6,7)

### ABOUT INSTRUCTOR

- प्रो. पीयूषकान्तदीक्षिताः सम्प्रति हरिद्वारस्थ उत्तराखण्डसंस्कृतविश्वविद्यालयस्य कुलपतयो वर्तन्ते ।
- वाराणस्यां यथाप्राचीनगुरुपरम्परं स्वनामधेयैः प्रो. सुधाकरदीक्षितप्रभृतिभ्यः आचार्यैः समधिगतन्यायादिशास्त्राः यथाकालं समस्तपरीक्षासु लब्धप्रथमस्थाना एते प्राचीनभारतीयविद्यासंरक्षणसंवर्धनतत्परा वर्तन्ते ।
- सम्पूर्णानन्दसंस्कृतविश्वविद्यालय - राष्ट्रियसंस्कृतसंस्थान - लालबहादुरशास्त्री - राष्ट्रियसंस्कृतविद्यापीठप्रभृति संस्थानेषु त्रिंशदधिकवर्षात्मकोऽध्यापनानुभवो वर्तते एतेषाम् ।
- अध्यापनेन सह NCC सम्बद्धानि नैकपदानि यथाकालं व्यभूषयन् ।
- एतेषाम् अनेकानि पुस्तकानि शोधपत्राणि च प्रकाशितानि सन्ति । न्यायपञ्चाननप्रभृतिभिः अनेकैः सम्मानैः विभिन्नसंस्थानद्वारा सम्मानिताः सन्ति एते
- वैदुष्येण सह प्रशासनकौशलम् मणिकाञ्चनसंयोग इव वर्तते ।
- एते भारतीयदर्शनशास्त्रस्य विशेषरूपेण न्यायशास्त्रस्य प्रसिद्धा विद्वांसो वर्तन्ते





### DR. MUSHTAQ HUSSAIN MAGLOO

Sr. Assistant Professor, Post Graduate Department of Urdu,  
University of Kashmir

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 6 weeks (02/07/2018 to 11/08/2018)

**EXAM DATE** : 18/08/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : 10+2 with knowledge of Urdu

#### OBJECTIVE OF COURSE

- Basics of Urdu Poetry
- Origin and Development of Urdu Ghazal, Nazm, Mathnavi, Qaseedah and Marsiya
- Poetic Techniques and Craftsmanship
- Basics of some important Prose Genres of Urdu Literature viz Afsana, Novel and Maktoob Nigari
- Origin and Development of Afsana, Novel and Maktoob Nigari in Urdu

#### LEARNING OUTCOME

The course "Study of Prose and Poetic Forms in Urdu Literature" is a Discipline Centric Courses in B.A(Prog.) under the Choice Based Credit System (CBCS). The course is specially designed to supplement and enhance the understanding of students about different dimensions of Urdu Prose and Poetry. To make the students understand basic features of some important poetic genres of Urdu like Ghazal and Nazm, Qaseedah, Mathnavi and Marsiya, and to give them an overview of some important Poetic Techniques used there.



#### COURSE PLAN

1. Urdu Marsiyae Ka Aagaz Wa Irtiqa
2. Afsanay ki sinfi shinakt
3. Deccan mein urdu masnavi ka agaz wa irtiqa
4. Drama Ka Fun
5. Gazal ki tareef wa takneeq
6. Maktoob Nigari aur is ki mukhtasar tareekh
7. MasnaviKiSenfieShinakhat
8. Noval ka Fun
9. Qaseedah ka fun
10. Rubayee ka fun
11. Shumaali hind main urdu masnavi ka aagaz wa irtiqa
12. Urdu afsanay ka Aagaz wa irtiqa
13. Urdu drama ka agaz wa irtiqa
14. Urdu Gazal Ka Aagaz Wa Irtiqa
15. Urdu main Qasedah nigaari ka aagaz wa irtiqa
16. Urdu marsiya ki sinfi shinakht
17. Urdu mein sinfi Rubayi ki Riwayat
18. Urdu Nazam Ka Aagaz Wa Irtiqa
19. Urdu Nazm Ki Sinfi Shinakhat
20. Urdu NovelKaAagazWalrtiqa

#### ABOUT INSTRUCTOR

- Assistant Professor, Department of Urdu, University of Kashmir
- Master's degree in Urdu from the University of Kashmir
- M.Phil and Ph.D under the supervision of (Late) Professor Majeed Muzmar.
- Possesses Degree in Education and Diplomas in IT and Urdu Journalism as well.





### DR. MUSHTAQ HUSSAIN MAGLOO

Sr. Assistant Professor, Post Graduate Department of Urdu,  
University of Kashmir

**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 6 weeks (16/07/2018 to 25/08/2018)  
**EXAM DATE** : 08/09/2018  
**NO OF CREDITS** : 2

**PRE-REQUISITES** : 10+2 with knowledge of Urdu

#### OBJECTIVE OF COURSE

- Basics of Urdu Classical Ghazal
- Origin and Development of Urdu Ghazal
- Poetic Techniques and Craftsmanship used in Urdu Ghazal.
- Biographical information about Selected Poets of classical Urdu Ghazal.
- Distinctive features of the poetry (Ghazals) of Selected poets.

#### LEARNING OUTCOME

The course "Study of Urdu Classical Ghazal" is a Discipline Centric Courses in B.A (Prog.) under the Choice Based Credit System (CBCS). The Ghazal originated in Arabia in the 7th century and later spread throughout the Middle East and South Asia. It was famous all around the Indian subcontinent in the 18th and 19th centuries. A Ghazal may be understood as a poetic expression of both the pain of loss or separation and the beauty of love in spite of that pain. It is derived from the Arabian panegyric qasida.



#### COURSE PLAN

1. Dard Ki Gazal Goyee
2. Dhaag Delhvi Ki Gazal Goyee
3. Faani Badayoni Ki Shaire
4. Faiz Ahmad Faiz Ki Gazal Gaoyee
5. Firaq Ki Gazal Goyee
6. Gawasi Ki Gazal Goyee
7. Gazal Kay Maqbooliyat Kay Asbab
8. Gazal ki tareef wa takneeq
9. Ghalib Ki Gazal Goyee
11. Jigar Muradabad Ki Gazal Goyee
12. Mir Taqi Mir Ki Shairi
13. Momin Khan Momin Ki Shairi
14. Nasir Kazmi Ki Gazal Goyee
15. Quli Qutub Shah Ki Gazal Goyee
16. Siraj Ki Gazal Goyee
17. Urdu Gazal Ka Aagaz Wa Irtiqa
18. Wali Dacanni Ki Gazal Goyee
19. Yagana Changeezi Ki Gazal Goyee

#### ABOUT INSTRUCTOR

- Assistant Professor, Department of Urdu, University of Kashmir
- Master's degree in Urdu from the University of Kashmir
- M.Phil and Ph.D under the supervision of (Late) Professor Majeed Muzmar.
- Possesses Degree in Education and Diplomas in IT and Urdu Journalism as well.



# Management and Professional Courses

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# Management and Professional Courses

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**DR. A. HAMEED**

Assistant Professor, Department of Education,  
University of Calicut

**TYPE OF COURSE : UG**

**INTENDED AUDIENCE: UG**

**COURSE DURATION : 13 weeks (9th July to 6th October 2018)**

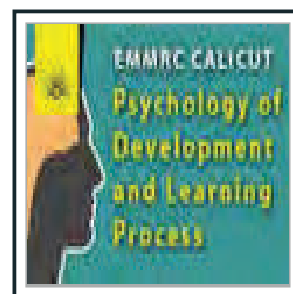
**EXAM DATE : 13<sup>th</sup> October 2018**

**NO OF CREDITS : 4**

**PRE-REQUISITES : Student who is passed any degree or students of D.El.Ed. Course can join this course.**

**OBJECTIVE OF COURSE**

- Acquaint with the meaning, nature and scope of educational psychology.
- Understand the growth and development of the learner and its importance in the learning process.
- Understand the developmental processes and needs of children and adolescents and role of teachers in facilitating development.
- Understand the factors affecting individual differences and the special problems of exceptional children.
- Acquaint with the prominent theories of learning, retention, and transfer of training and the strategies to facilitate each one of these.



**LEARNING OUTCOME**

After learning the Course, the student teacher will be able to:

1. Get acquainted with the meaning, nature and scope of educational psychology.
2. Understand the growth and development of the learner and its importance in the learning process.
3. Understand the developmental processes and needs of children and adolescents and role of teachers in facilitating development.
4. Understand the factors affecting individual differences and the special problems of exceptional children.
5. Understand the concept of intelligence and the process of memory.
6. Understand the various theories of personality
7. Acquaint with the prominent theories of learning,, retention, and transfer of training and the strategies to facilitate each one of these.

**COURSE PLAN**

**Week 01:** 1. Introducing Educational Psychology, 2. Introduction to Development and Principles of Development, 3. Biological Aspects of Development

**Week 02:** 4. An Introduction to the Concept of Developmental Tasks, 5. Adolescence, 6. Personality: Concept and Definition

**Week 03:** 7. Sigmund Freud's Psychoanalytic Theory, 8. Gordon Allport: A Trait Theory of Personality, 9. Carl Jung's Analytic Theory of Personality

**Week 04:** 10. Personality Theories of Cattell and Eysenck, 11. The Psychology Of Adjustment, 12. Mental Health

**Week 05:** 13. Characteristics of integrated personality, 14. Projective Techniques, 15. Theories of Intelligence

**Week 06:** 16. Gardner's Theory of Multiple Intelligences, 17. Creativity, 18. Aptitude

**Week 07:** 19. Exceptional Children, 20. Gifted And Mentally Retarded Children, 21. Learning Disability

**Week 08:** 22. Types of Learning Disabilities, 23. Introduction to Learning and Factors affecting Learning, 24. Motivation

**Week 09:** 25. Abraham Maslow's Hierarchical Theory of Motivation, 26. Behaviourist Theories of Learning – Pavlov And Thorndike, 27. Behaviourist Theories of Learning – Skinner

**Week 10:** 28. Cognitive Theories of Learning - Gestalt Theory, Lewin's Field Theory, 29. Jean Piaget's Cognitive Learning Theory, 30. Learning Theories of Bruner, Ausubel and Gagne

**Week 11:** 31. Social Learning Theory and Social Constructivism, 32. Transfer of Learning, 33. Remembering/ Memory

**Week 12:** 34. Forgetting, 35. Introduction to Counselling,

**Week 13:** 36. Introduction To Guidance

**ABOUT INSTRUCTOR**

- Resource person in UGC-Academic Staff Colleges & Expert in Doctoral Committee Meeting.
- Published research articles in reputed International and National Peer reviewed Journals.
- Chaired International and National Seminars.
- Academic profile include MA (History), M.Ed (Social Studies), MA (Sociology), MSc Applied Psychology, PG Diploma in Guidance and Counselling, Ph.D. (Education) and NET (Education).





## DR. JAGDISH SINGH

Associate Professor, College of Physical Education,  
Punjabi University, Patiala (Pb.)

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2

**COURSE DURATION** : 6 weeks (07-09-2018 to 22-10-2018)

**EXAM DATE** : 06-11-2018 (Tentative)

**NO OF CREDITS** : 2

### OBJECTIVE OF COURSE

- Acquaint with Psychology through special reference to Physical Education.
- To understand about psychological change and limitations.
- Discuss about growth and development at different stages with special reference to adolescence
- To understand the relationship between body and mind.
- Appreciate influence of heredity and environment on child's development.

### LEARNING OUTCOME

After going through this course students shall be able to:

- Know about the Psychology with special reference to Physical Education.
- Understand psychological change and limitations.
- Know about the instinct and mental health.
- Differentiate stages adolescence on the basis of growth and development.
- Understand the relationship between body and mind.
- Appreciate the influence of heredity and environment on child's development.
- Understand the relationship between body and mind.



### COURSE PLAN

**Week 01:** Psychology & Its usefulness in Physical Education, Emotion, Instinct

**Week 02:** Motivation in Physical Education, Relationship between body & Mind, Learning

**Week 03:** Learning Curves, Growth and Development, Adolescence

**Week 04:** Heredity and Environment, Infancy and Childhood, Mental Health

**Week 05:** Play, Group Formation, Leadership and its Qualities

**Week 06:** Guidance and its Importance Personality

### ABOUT INSTRUCTOR

- Working as Associate Professor, College of Physical Education, Punjabi University, Patiala and served as Badminton coach for 8 years with sports department Chandigarh.
- Has 21 year teaching experience.
- Presented more than 15 research papers in National and International conferences.



**DR. UMER FAROOQUE. T.K.**

Assistant Professor of Education  
University of Calicut

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : Any Graduation

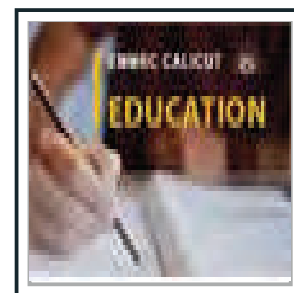
**COURSE DURATION** : 15 weeks (16/07/2018 & 21/10/2018)

**EXAM DATE** : 05/11/2018 Tentative

**NO OF CREDITS** : 4

**OBJECTIVE OF COURSE**

- This course offers an overview of the education under colonial rule and in independent India.
- In the course, the concept of education and its aims and functions will be discussed based on the Indian and western philosophical thoughts.
- It is organized to understand the universal ideas about education, aims, methods, curriculum and teacher taught relationship.
- The course is discussed the major contributions of great thinkers in India and the world.
- The course also offers the sociological basis of education and the relationship between education and sociology.

**LEARNING OUTCOME**

Clear understanding about the conceptual aspects of education, philosophical and sociological foundations of education. Get an overview of the education under colonial rule and in independent India. Analysis the concept of education and its aims and functions based on the Indian and western philosophical thoughts. Through this course student-teachers are able to look at, understand, interpret the universal ideas about education, aims, methods, curriculum and teacher taught relationship. Students can understand the major contributions of great thinkers in India and the world. The course also offers the sociological basis of education and the relationship between education and sociology. Understand various factors responsible for development of personality.

**COURSE PLAN**

**Week 01:** meaning, definition and concepts of education, Factors Influencing Education, Aims and Functions of Education

**Week 02:** Agencies of Education, school as an agency of Education

**Week 03:** Educational functions of the state and central Government, Free and compulsory Education

**Week 04:** Education of socially backward classes, constitutional provisions for education in India

**Week 05:** Philosophy of education meaning, central teachings in Indian philosophy and scope

**Week 06:** Approaches to Education-Idealism

**Week 07:** Approaches to Education-Naturalism

**Week 08:** Approaches to Education- Pragmatism

**Week 09:** Education in Ancient India, Buddhist Education in Ancient India, History of Indian Education

**Week 10:** Education during Colonial Rule in India, Some major Education commissions during the colonial period

**Week 11:** University Education Commission, Secondary education commission, Indian Education Commission

**Week 12:** National Policy on Education, New Education Policy and NPE Review Committees

**Week 13:** Great Philosophers of Education

**Week 14:** Educational Sociology – Theoretical perspective

**Week 15:** Socialisation and Education, education and social change

**ABOUT INSTRUCTOR**

- Member, Board of Studies in Education (PG), University of Calicut.
- Published a number of research articles in reputed International and National Peer reviewed Journals.
- Presented many papers in International and National Seminars and also Chaired sessions .
- Academic profile include MA (Arabic), MA (Sociology), MSc Applied Psychology, M.Ed , M.Phil (Educational Technology), Ph.D. (Education) and NET (Education).



**DR MRIDULA K.**

Assistant Professor, NSS Training College, Ottapalam  
University of Calicut

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE**: UG

**COURSE DURATION** : 17 weeks (1 July, 2018 to 25 Oct, 2018)

**EXAM DATE** : On or before October 25, 2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Teacher aspirants having English Literature background can make use of this course

### OBJECTIVE OF COURSE

This course offers an overview of the education under colonial rule and in independent India. In the course, the concept of education and its aims and functions will be discussed based on the Indian and western philosophical thoughts. It is organized to understand the universal ideas about education, aims, methods, curriculum and teacher taught relationship. The course is discussed the major contributions of great thinkers in India and the world. The course also offers the sociological basis of education and the relationship between education and sociology.



### LEARNING OUTCOME

The course will enable the learner to :

1. Understand the nature of language as a dynamic entity.
2. Understand why English language learning is important in school education.
3. Develop an insight into the language learners and the learning process.
4. Familiarize with the relevant approaches and methods in English language teaching.
5. Perceive learning as a generative process.
6. Experiment with various learning strategies considering the demands of the context and the needs of each individual learner.
7. Blend technology, pedagogy and content to realize the learning objectives.
8. Develop awareness on modern assessment strategies and design assessment techniques relevant to language learning.
9. Identify and practice micro skills in teaching language.
10. Effectively introduce different genres of literature and to develop the sense of aesthetic appreciation in learners.
11. Explore avenues available for own professional development.

### COURSE PLAN

**Week 01:** Module-1 Language-Definition, Characteristics, Functions and Some Misconceptions., Module -2 Historical development, Status and Functions of English in India, Module- 3 Acquisition and Learning, Factors Influencing Acquisition of a Language and Problems in Acquisition

**Week-02:** Module-4 Aims and Objectives of English Language Teaching in India, Module-5 Approaches in Teaching English, Module-6

Methods of Teaching English

**Week-03:** Module -7 Listening and Speaking Skills, Module-8 Reading Skill, Module-9 Writing Skill

**Week04:** Module-10 Study skill, Module11-Theories of Second Language Acquisition /Learning Behaviourism, Module12-Theories of second language acquisition-Constructivism

**Week-05:** Module13-Theories of second Language Acquisition Cognitive, Module14-Multiple Intelligence and Nurturing the Linguistic Capacities

**Week-06:** Module15- Principles of Language Teaching, Module16-English Language Curriculum

**Week-07:** Module17-Micro Teaching in English, Module18-Planning for Learning

**Week-08:** Module19-Process of Planning Lessons, Module20-Teaching of Vocabulary and Grammar

**Week-09:** Module21-Functional Literature for Language Development, Module22- Models of teaching –an introduction

**Week-10:** Module23-Synectic Model in Instruction, Module24-Advance Organizer Model in Instruction

**Week-11:** Module25-Direct Instruction Model in Instruction, Module26- Barriers in the Language Classroom

**Week-12:** Module27-Humour and Creativity in ELT, Module28- Group Facilitation Skills for Differentiated Learning

**Week-13:** Module29-Technology in English Language, Module30-Collaborative Online Platforms for Language Learning

**Week-14:**Module31-E-Learning Resource Development, Module32-Tests and Evaluation in English

**Week-15:** Module33 -Performance Assessment in Language Learning, Module34-Teacher Development- what and how

**Week-16:** Module35-A professional English Teacher in a Global context, Module36 Innovations and Researches in ELT

**Week -17:** Term End Assessment

### ABOUT INSTRUCTOR

The major objective of the course is to prepare better English teachers by integrating content and technology to equip them to face the challenges of present day classrooms.



**DR. V.P.JOSHITH**

Assistant Professor, Department of Education  
Central University of Kerala

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 36 weeks (01/07/2018 & 31/12/2018)

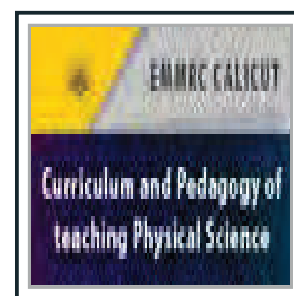
**EXAM DATE** : 25th November 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : The pre-requisites the learners needs is that, they should have the love for science and science teaching. They should be mentally prepared to extract the importance of technology to their classrooms.

**OBJECTIVE OF COURSE**

- To understand the importance of science education
- To comprehend the processes and methods in science teaching
- To integrate technology in the modern science classrooms
- To analyse the present science curriculum and to design some innovative strategies for its transaction
- To equip the learners with the latest technological tools and strategies in science teaching
- To inculcate the value addition among science teachers so as to develop a prospective society
- To foster creativity and problem solving approach among science learners
- To redefine science for the development of community, preserving its identity and nature.

**LEARNING OUTCOME**

The course will enable the student teachers to

1. Acquaint with the meaning and nature of physical science,
2. Comprehend why science is important in school education,
3. Familiarize the various methods and strategies of teaching science,
4. Develop science process skills for lifelong professional competency,
5. Perceive child as a creative learner and device learning goals individually for our children,
6. Design specific instructional strategies for learners accounting their individuality,
7. Explore different ways of creating learning situations considering needs of the learner and the context ,
8. Integrate the knowledge in science to devise appropriate assessment techniques,
9. Understand the importance of learning as a generative process,
10. Integrate technology, pedagogy and content for the realization of objectives,
11. Examine the different pedagogical issues in the context of learner and society and to suggest ways for resolving it,
12. Facilitate development of scientific attitudes among learners

**COURSE PLAN**

<b>Week 1:</b> Nature and Scope of Physical Science	<b>Week 19:</b> Pedagogic Analysis of Physics Class X
<b>Week 2:</b> Aims and Objectives of Teaching Physical Science	<b>Week 20:</b> Scientific Method - I
<b>Week 3:</b> Methods of Teaching Physical Science	<b>Week 21:</b> Scientific Method - II
<b>Week 4:</b> Models of Teaching	<b>Week 22:</b> Evaluation in Science Teaching - I
<b>Week 5:</b> Individualised and Innovative Methods of Teaching Physical Science	<b>Week 23:</b> Evaluation in Science Teaching - II
<b>Week 6:</b> Microteaching Instruction	<b>Week 24:</b> The Professional Science Teacher
<b>Week 7:</b> Learning as a Generative Process and Process Skills in science	<b>Week 25:</b> Science Library and Laboratory
<b>Week 8:</b> Basic Theories of Learning Science	<b>Week 26:</b> Resource Materials in Science Teaching
<b>Week 9:</b> Curriculum Development	<b>Week 27:</b> Computer and Digital Resources in Science Teaching - I
<b>Week 10:</b> Curricular Reforms in India and Abroad	<b>Week 28:</b> Computer and Digital Resources in Science Teaching - II
<b>Week 11:</b> School Science Curriculum	<b>Week 29:</b> Co-curricular Activities and Action Research in Science
<b>Week 12:</b> National Curriculum Framework NCF 2005	<b>Week 30:</b> Science Education for Exceptional Children
<b>Week 13:</b> Planning Instruction	<b>Week 31:</b> Science for the Better Development of the Society
<b>Week 14:</b> Pedagogic Analysis of Chemistry Class VIII	<b>Week 32:</b> Science Scholarship Programmes for Children
<b>Week 15:</b> Pedagogic Analysis of Physics Class VIII	<b>Week 33:</b> ICT for Better Teaching and Learning in Science - I
<b>Week 16:</b> Pedagogic Analysis of Chemistry Class IX	<b>Week 34:</b> ICT for Better Teaching and Learning in Science - II
<b>Week 17:</b> Pedagogic Analysis of Physics Class IX	<b>Week 35:</b> Techno Pedagogical and Content Knowledge (TPACK)
<b>Week 18:</b> Pedagogic Analysis of Chemistry Class X	<b>Week 36:</b> Open Educational Resources (OER) & Free Open Source

**ABOUT INSTRUCTOR**

- Working as Assistant Professor in the Department of Education, Central University of Kerala, have got more than 13 years of teaching experience in the field of Education.
- Had contributed to the academic literature with many articles in National and international journals.
- Has been associated with many student oriented activities of NSS as Programme officer, Co-ordinator for International students and others.
- Since five years he was associated with CEC, CIET-NCERT for the e-content development process. Designing Courses through MOODLE/SWAYAM is the latest pedagogical practice that he is handling and training at present.



**DR. T. ASIR**

Assistant Professor and Head i/c Department of Mathematics-DDE,  
Madurai Kamaraj University, Madurai, Tamil Nadu.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 6 weeks (16/07/2018 to 24/08/2018)

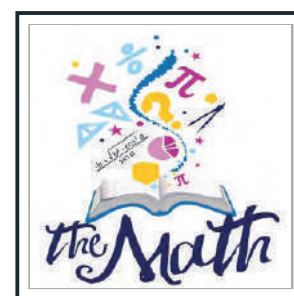
**EXAM DATE** : 29/11/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : 12th Std. Pass, Knowing English and basic Mathematical concepts.

**OBJECTIVE OF COURSE**

- To improve understanding of some of the mathematical concepts which are important in the school mathematics.
- Enable the students to cope up confidently with the mathematics needed in their future studies, workplaces or daily life in a technological and information-rich society.
- The course aims to develop student's ability to manipulate numbers, symbols and other mathematical objects.
- To provide a clarity about fundamental concepts and processes of mathematics.
- Enable the students to develop the knowledge, skills and attitudes necessary to pursue further studies in mathematics.

**LEARNING OUTCOME**

- Students will develop a positive attitude towards mathematics and the capability in appreciating the aesthetic nature and cultural aspect of mathematics.
- Applying mathematical knowledge to solve a variety of problems.
- After the course the student will have demonstrate knowledge of the syllabus material.
- The students of mathematics develop the habit of systematic thinking and objective reasoning.
- Students could integrate many concepts and skills that they have learnt into a problem-solving ability.
- Students should be able to use appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations including those in real-life contexts.

**COURSE PLAN**

**Week 01:** Real numbers system and Measurements

**Week 02:** 2D/3D objects and linear equations

**Week 03:** Percentage, Ratio and Proportion concepts

**Week 04:** Nature of Mathematics

**Week 05:** Pedagogical considerations and Communicating skills of Mathematics

**Week 06:** Algebraic Expressions and Mensuration

**ABOUT INSTRUCTOR**

- Faculty and HOD, Departments of Mathematics at Madurai Kamaraj University.
- Published 21 research articles in International Journals and served as a referee of several international journals.
- Currently his research work is supported by SERB-MATRICES project and UGC-Startup Grant. Also 2 PhD's and 20 M.Phil's scholars have been awarded under his guidance.
- Further he has delivered 29 invited talks in various National/International conferences in India and 2 talks in abroad countries.



**DR. S. PRAKASH**Principal, Thiagarajar College of Preceptors,  
Madurai

**TYPE OF COURSE** : Certificate  
**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 8 weeks (16/07/2018 to 07/09/2018)  
**EXAM DATE** : 22/11/2018  
**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed higher secondary

**OBJECTIVE OF COURSE**

- To describe the concept of human development
- To discuss the theories of Erickson, Piaget and Kohlberg.
- To analyze the physical growth and development of a child.
- To state the concept of special children.

**LEARNING OUTCOME**

At the end of the course the student will be able to describe the concept of human development state the concept of special children.

**COURSE PLAN****Week 01**

- 01 Theories of Human Development
- 02 Development and developmental principles
- 03 The Influence of Heredity and Environment on Development
- 04 Methods Adopted for Developmental Study

**Week 02**

- 05 Concept of Socialisation
- 06 Theories of Erikson, Piaget & Kohlberg
- 07 Significant Development Periods in the Human Life Span
- 08 Importance of conception, prenatal development and birth
- 09 Physical and mental development of infants

**Week 03**

- 10 Emotions in Infancy
- 11 The Infant in the Family and Implications For Personality Development
- 12 Physical growth and motor development intellectual development
- 13 Development of Personality with Special Reference to Identification and Child Rearing Techniques

**Week 04**

- 14 Gender Stereotyping, Morality
- 15 Play Patterns of Preschool Children
- 16 The child 6 to 12 years - General overview
- 17 Physical growth and development

**Week 05**

- 18 The developing mind intelligence
- 19 Language and thought
- 20 Social World of the child

**Week 06**

- 21 Moral attitudes and Behaviour
- 22 Development of 'self- identity' 'self-concept' 'gender roles'

**Week 07**

- 23 Play, interests and activities of the elementary school child
- 24 The concept of special children - talented, creative, gifted children
- 25 Slow learners and under achievers

**Week 08**

- 26 Emotionally disturbed children
- 27 Culturally and socially disadvantaged children

**ABOUT INSTRUCTOR**

- Working as Principal at Thiagarajar College of Preceptors, Madurai, has 10 years of teaching experience in colleges of Education.
- Published six books edited 19 chapters in 16 books and published 40 research articles in both National and International Journals.
- Presented 18 papers in International, National, State level Seminars.
- An approved senior member of International Society for Research and Development (ISRD), London.





**DR.S.PRAKASH**Principal, Thiagarajar College of Preceptors,  
Madurai**TYPE OF COURSE** : Certificate**INTENDED AUDIENCE** : UG**COURSE DURATION** : 7 weeks (30/07/2018 to 17/09/2018)**EXAM DATE** : 27/11/2018**NO OF CREDITS** : 2**PRE-REQUISITES** : Should have completed higher secondary**OBJECTIVE OF COURSE**

- To define cognition and learning.
- To describe the theories of intelligence.
- To list the factors contributing to learning.
- To study on the developing child.

**LEARNING OUTCOME**

- At the end of the course the student will be able to define cognition and learning
- list the factors contributing to learning

**COURSE PLAN****Week 01**

- 01 Cognition – An Introduction
- 02 Definition of general intelligence & 5 Factors of IQ
- 03 Theories & Measurement of Intelligence
- 04 Individual Differences in Cognitive Abilities

**Week 02**

- 05 Shaping of Cognitive Abilities
- 06 Sensation
- 07 Attention, Association and Perception
- 08 The Learning process and Theories of Learning

**Week 03**

- 09 Types of learning & Techniques of learning
- 10 Knowledge Organization Handling Remembering and Recall
- 11 Knowledge organization – Facilitating/guiding for optimal knowledge organization

**Week 04**

- 12 The Developing mind - Piagetian paradigm
- 13 Concept Formation
- 14 Relationship

**Week 05**

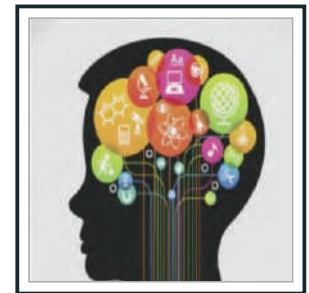
- 15 The Process of Problem Solving from Identification to Solution
- 16 Kinds of Problems and Approaches to Problem Solving
- 17 Lateral Thinking, Making choices, Development of creative thinking

**Week 06**

- 18 Factors contributing to learning - Personal - Motivations and Inclinations, Physical and Mental health
- 19 Factors contributing to learning - Environmental and Interpersonal
- 20 Environmental factors that influence learning
- 21 Alternative conceptions

**Week 07**

- 22 Parameters of Individual Development - Erick Erickson Paradigm
- 23 Developing hobbies and interest of children
- 24 Moral Development and handling emotions
- 25 Personality Development

**ABOUT INSTRUCTOR**

- Working as Principal at Thiagarajar College of Preceptors, Madurai, has 10 years of teaching experience in colleges of Education.
- Published six books edited 19 chapters in 16 books and published 40 research articles in both National and International Journals.
- Presented 18 papers in International, National, State level Seminars.
- An approved senior member of International Society for Research and Development (ISRD), London.





## DR. G. VICTORIA NAOMI

Professor, Department of Special Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 8 weeks (16/07/2018 to 07/09/2018)

**EXAM DATE** : 30/11/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed higher secondary, Should possess a basic interest towards children with visual impairment

### OBJECTIVE OF COURSE

- Comprehend the theories of learning and intelligence and their applications for teaching children
- Analyze the learning process, nature and theory of motivation
- Describe the stages of teaching and learning and the role of teacher

### LEARNING OUTCOME

- Develop skills to situate self in the teaching learning process.
- Describe the stages of teaching and learning and the role of teacher.
- Analyze the scope and perspective of assessment in teaching learning process in the school system towards enhanced learning



### COURSE PLAN

#### Week 01

01. Definition, Meaning & Learning and Concept formation - 1

02. Definition, Meaning & Learning and Concept formation - 2

03. Learning theories: a. Behaviourism: Pavlov, Thorndike, Skinner, b. Cognitive: Piaget, Bruner, c. Social Constructivism: Vygotsky, Bandura

04. Intelligence

#### Week 02

05. Creativity I

06. Learning, Teaching & Assessment

07. Sensation

08. Sensation: Definition and Sensory Process

#### Week 03

09. Attention: Definition and Affecting Factors

10. Perception: Definition and Types

11. Memory, Thinking, and Problem Solving

12. Motivation: Nature, Definition and Maslow's Theory

#### Week 04

13. Individualized instruction. Interactive Learning

14. Styles of Learning/Teaching or Individualized Educational Programme

15. TLM - Importance and needs

16. Programmed Instruction

#### Week 05

17. Creativity II

18. Creativity III

19. Meaning, Nature and Scope of Guidance

20. Guidance in Classroom

#### Week 06

21. Guiding Students with Special Needs

22. Meaning, Nature and Scope of Counselling - I

23. Meaning, Nature and Scope of Counselling - II

#### Week 07

24. Formative and summative evaluation, Curriculum Based Measurement

25. Revisiting key concepts in school evaluation: filtering learners, marks, credit, grading, choice, alternate certifications, transparency, internal-external proportion, improvement option

26. Management of Classroom Behaviour - I

27. Management of Classroom Behaviour - II

#### Week 07

28. Assessment of diverse learners: Exemptions, concessions, adaptations and accommodations;

29. School examinations: Critical review of current examination practices and their assumptions about learning and development; Efforts for exam reforms: Comprehensive and Continuous Evaluation (CCE), NCF (2005) and RTE (2009)

### ABOUT INSTRUCTOR

- Has an experience of over three decades having wide and rich experience in teaching children with visual impairment in inclusive settings.
- Undertaken various researchers in the field of special education.
- Has authored nine books and published over 100 articles in the field of Special Education.
- Coordinated Indo-US Research Project on Response to Intervention Model in Indian Context.





## DR. G. VICTORIA NAOMI

Professor, Department of Special Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 8 weeks (1/08/2018 to 20/09/2018)

**EXAM DATE** : 07/12/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed higher secondary, Should possess a basic interest towards children with visual impairment

### OBJECTIVE OF COURSE

- Acquire basic information about Braille, its relevance and important functional aspects
- Gain information on types and significance of different Braille devices
- Familiarize with Mathematical devices in teaching children with visual impairment
- Get acquainted with the types and significance of basic devices relating to Science, Geography and Low Vision

### LEARNING OUTCOME

- Help the learners to understand the evolution of Braille and its relevance to children with visual impairment
- Familiarize with the different types of devices available for children with visual impairment



### COURSE PLAN

#### Week 01

01. Louis Braille and the Evolution of Braille
02. Continuing Relevance of Braille vis-a-vis Audio Material
03. Braille Signs, Contractions and Abbreviations--English Braille

#### Week 02

04. Braille Signs and Symbols-Hindi/Regional Language
05. Braille Reading and Writing Processes
06. Slate and Stylus & Braille Writer

#### Week 03

07. Learning media assessment
08. Braille reading readiness
09. Techniques of teaching Braille
10. Interaction

#### Week 04

11. Techniques of Teaching print to children with low vision
12. Braille aids and devices, optical devices for print reading and writing
13. Assistive Technology for People with Disabilities

#### Week 05

14. Screen Readers with Special Reference to Indian Languages; Magnifying Software, and Open Source Software.
15. Braille Note takers and Stand-alone Reading Machines
16. Braille Translation Software with Particular reference to Indian Languages and Braille Embossers

#### Week 06

17. On-Line Libraries and Book share
18. Daisy Books, Recordings, and Smart Phones.
19. Thermoform and Swell Paper technology and Software's for developing tactile diagrams

#### Week 07

20. Mathematical Devices: Taylor Frame and Types, Abacus, Geometry Kit, Algebra Types
21. Geography: Maps-Relief, Embossed, Models

#### Week 08

22. Science Material
23. Low Vision Aids-Optical, Non-Optical, Vision Training Material
24. Electronic Devices- Note takers and Refreshable Braille Displays, Braille Embossers & Braille Translation Software
25. Schemes and Sources of Availability

### ABOUT INSTRUCTOR

- Has an experience of over three decades having wide and rich experience in teaching children with visual impairment in inclusive settings.
- Undertaken various researches in the field of special education.
- Has authored nine books and published over 100 articles in the field of Special Education.
- Coordinated Indo-US Research Project on Response to Intervention Model in Indian Context.





**MRS. R. SHANTHI**

Assistant Professor (SG) Department of Special Education Avinashilingam Institute for Home Science and Higher Education for Women Coimbatore

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 8 weeks (9 July to 31 August, 2018)

**EXAM DATE** : 04/12/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed higher secondary, Should possess a basic interest towards Disabilities related information

## OBJECTIVE OF COURSE

- Will classify different types of sensory impairments and its prevalence and describe the process of hearing & implications of various types of hearing loss.
- Will explain the issues & ways to address challenges in educating students with hearing loss.
- Will describe nature, characteristics & assessment of students with low vision & visual impairment.
- Will suggest educational placement and curricular strategies for students with low vision & visual impairment.
- Will explicate the impact of deaf-blindness & practices for functional development.



## LEARNING OUTCOME

- Help the learners to understand the population information and its sources, composition, components etc.
- Assist the students to further their specialization in the field of Population Studies or Social Demography.

## COURSE PLAN

### Week 01: Introductory Note

01. Concept of Impairment
02. Importance of Hearing
03. Definition and Identification of Hearing Impairment- 1
04. Definition and Identification of Hearing Impairment- 2

### Week 02:

05. Incidence and Prevalence of Hearing Impairment
06. Types and Characteristics of Hearing Impairment
07. Challenges arising due to congenital and acquired hearing loss
08. Types and Characteristics of Hearing Loss

### Week 03:

09. Language & communication issues attributable to hearing loss and need for early Intervention
10. Issues & measures in literacy development and scholastic achievement of students with hearing loss
11. Restoring techniques using human (interpreter) & technological support (hearing devices)

### Week 04:

12. Blindness and Low Vision--Definition and Classification
13. Causes of Blindness and Low Vision
14. Effects of Blindness on Growth and Development Physical, Social, Intellectual and Emotional

### Week 05:

15. Effects of Visual Impairment on Personality Development - Verbalism & Mannerism
16. Psychological and Sociological Implications of Visual Impairment -I
17. Psychological and Sociological Implications of Visual Impairment -II
18. Importance of Early Identification and Intervention

### Week 06:

19. Educational Problems of Low Vision children
20. Selecting Educational Placement

### Week 07:

21. Definition, causes, classification, prevalence and characteristics of deaf-blindness
22. Screening, assessment, identification & interventional strategies of deaf-blindness
23. Effects and implications of deaf-blindness on activities of daily living & education

### Week 08:

24. Fostering early communication development: Methods, assistive devices and practices including AAC
25. Addressing orientation, mobility & educational needs of students with deaf-blindness

## ABOUT INSTRUCTOR

- Has 23 years of experience in the field of special education, especially in the area of teaching children with hearing impairment.
- Published 2 books and 10 articles in International journals and 26 at National level.
- Developed Finger spelling for 247 Tamil alphabets.
- Worked in the Indo - US Research Project on Response to Intervention Model in Indian Context.





## DR. K.SAMBATH RANI

Asst. Professor (SG) Dept. of Spl Education Avinashilingam Institute for Home Science and Higher Education for Women  
Coimbatore

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 8 weeks (16/7/2018 to 7/9/2018)

**EXAM DATE** : 06/12/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed Higher secondary.

Should possess a basic interest towards serving children with Neuro Developmental Disorder.

### OBJECTIVE OF COURSE

- Will explain the various needs of children with learning Disability and acquire the skills in training them.
- Will distinguish between mental illness and mental retardation
- Will describe the nature, causes, prevention of intellectual Disability and strategies for teaching functional academics for children with Intellectual Disability.
- Will help to acquire skills in training and rehabilitating children with multiple Disabilities.
- Will enable to handle children with Autism Spectrum Disorder.



### LEARNING OUTCOME

The students will be able to identify, classify and Rehabilitate children with Learning Disability, Intellectual Disability, Multiple Disability, and Autism Spectrum Disorder. In addition they will be able to differentiate various types of disabilities. Understand the various approaches and methods that can be used for Rehabilitating children with Neuro Developmental Disabilities.

### COURSE PLAN

#### Week 01:

01. Concept and Definition of Learning Disabilities
02. Strategies to develop Reading skills
03. Strategies to Develop Spelling Skills

#### Week 02:

04. Strategies to develop Writing Skills (Maths)
05. Strategies to develop Number skills (Maths)
06. Learning Disabilities - Types and Associated Conditions-I

#### Week 03:-

07. Learning Disabilities - Types and Associated Conditions-II
08. Learning Disabilities - Types and Associated Conditions-III
09. Mental Illness - Definition and Identification
10. Mental Illness - Types

#### Week04 :

11. Mental Retardation - Definition and Identification
12. Mental Retardation - Types
13. Mental Retardation - Levels
14. Mental Retardation - Causes

#### Week05:

15. Mental Retardation - Incidence and Prevalence
16. Mental Retardation - Prevention
17. Strategies for Functional Academics and Social Skills

#### Week06:

18. Mental Retardation-Intervention and Educational Programmes-Part-1
19. Mental Retardation intervention and educational programmes 2
20. Multiple Disabilities - Definition and Identification

#### Week07:-

21. Autism Spectrum Disorder
22. Autism Spectrum Disorder - Needs & Intervention of Children with Autism
23. Tools and Areas of Assessment

#### Week08:-

24. Instructional Approaches & Teaching Methods
25. Vocational Rehabilitation for Individual with ASD

### ABOUT INSTRUCTOR

- Has 28 years of experience in the field of Special Education.
- Specialized in two Major areas Visual Impairment and Mental Retardation.
- She had authored Two Books and written Course Material in Special Education to Tamil Nadu Open University.





## SUBHA DAS MOLICK

Visiting faculty ILead College, Kolkata

**TYPE OF COURSE :** UG/PG

**INTENDED AUDIENCE :** UG/PG

**PRE-REQUISITES :** Class XII pass preferably with English as the medium of instruction

**COURSE DURATION :** 14 weeks (6<sup>th</sup> Aug, 2018 to 7<sup>th</sup> Nov, 2018)

**EXAM DATE :** Tentatively Dec, 2018

**NO OF CREDITS :** 4

### OBJECTIVE OF COURSE

- To Put television in India with a historical perspective
- Orient the students to the power and importance of television as a medium of communication
- To Make the student aware of the skills to be acquired for television production, particularly news production
- To Sensitize the student to "television culture"

### LEARNING OUTCOME

The modules in this course cover all aspects of television programming, with special emphasis on crafting news for television. On one hand there are lecture demonstrations on practical aspects of crafting news, on the other hand there are theoretical discourses on the cultural impact of television.



### COURSE PLAN

#### Week 1:

Module 1 : History of Broadcasting

Module 2 : The First Two Decades of Indian Television

Module 3 : Satellite Instructional Television Experiment (SITE)

#### Week 2:

Module 4 : The Asian Games and Setting up of National Network

Module 5 : Initiation of Private News Coverage in India

Module 6 : The Language of Television

#### Week 3:

Module 7 : Cultural Theory and its Applications Part 1

Module 8 : Cultural Theory and its Applications Part II

Module 9 : Audience segments and cultural impact Theory of visual literacy: Gestalt

#### Week 4:

Module 10 : Introduction to Videography

Module 11 : Types of Video Camera and Their Selection

Module 12 : Lighting techniques

#### Week 5:

Module 13 : Digital Video Tape Recording Formats

Module 14 : Microphone and its Uses

Module 15 : Writing the Audio Visual script

#### Week 6:

Module 16 : Television News Production

Module 17 : Television News Anchoring

Module 18 : Writing for News and Current Affairs 1

#### Week 7:

Module 19 : Writing for News & Current Affairs II: Writing to Pictures

Module 20 : Packaging, Use of Graphics and Special Effects For TV Journalism

Module 21 : Indian Constitution and Article 19A

#### Week 7:

Module 19 : Writing for News & Current Affairs II: Writing to Pictures

Module 20 : Packaging, Use of Graphics and Special Effects For TV Journalism

Module 21 : Indian Constitution and Article 19A

#### Week 8:

Module 22 : Censorship and control of the press and other media

Module 23 : Press Council of India

Module 24 : Common Legal Issues

#### Week 9:

Module 25 : Codes of journalistic ethics and professional morality

Module 26 : Semiotics I

Module 27 : Semiotics II

#### Week 10:

Module 28 : Multi Camera Set Up

Module 29 : Reporting Skills

Module 30 : Digital Editing: Software and Equipment

#### Week 11:

Module 31 : Colour Correction & Chroma Keying

Module 32 : News Editing

Module 33 : Analysis of Reality Television

#### Week 12:

Module 34 : Trends of non-fiction television in India Part 1

Module 35 : Trends of non-fiction television in India Part II

Module 36 : Television Audience Measurement

#### Week 13

Module 37 : Honing Your Interview Skills

Module 38 : Analysis of Advertisement Part I

Module 39 : Analysis of Advertisements Part II

#### Week 14:

Module 40 : Breaking News

Module 41 : Scripting for Soaps and Serials

### ABOUT INSTRUCTOR

- A media teacher and a documentary filmmaker, has made more than 50 documentary films on a variety of subjects.
- Headed Film Studies and Mass Communication Deptt. At the St. Xavier's College, Kolkata.
- Currently Secretary of Bichitra Pathshala.





## MRS. R. NAGOMI RUTH

Assistant Professor Department of Special Education Avinshilingam Institute for Home Science and Higher Education for Women Coimbatore

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 8 weeks (16/07/2018 to 07/09/2018)

**EXAM DATE** : 6/12/2018 (Tentative)

**NO OF CREDITS** : 2

**PRE-REQUISITES** : ·Should have completed higher secondary  
Should possess a basic interest towards visual impairment & special education

### OBJECTIVE OF COURSE

- Comprehend the concept and meaning of Orientation & Mobility
- Acquire skills in O & M teaching
- Able to demonstrate Sighted guide technique, protective technique and Cane technique
- Analyze various mobility techniques

### LEARNING OUTCOME

- Conceptualize the Effect of Visual impairment in Physical growth & development
- Be able to demonstrate the O & M skills in terms of sighted guide techniques, pre cane skills and cane technique
- Describe the concept of Orientation & Mobility to the visually impaired
- Able to train Mobility skills to visually impaired people



### COURSE PLAN

#### Week 01:

1. Effect of visual impairment on growth and development: Physical, Motor, Language, Socio-emotional, and Cognitive development
2. Effects of Visual Impairment on Personality Development - Verbalism & Mannerism
3. What is Orientation and Mobility?

#### Week 02:

4. Orientation and Mobility -- Definition, Importance and Scope
5. Basic Terminologies Associated with O&M: Trailing, Landmarks, Clues, Cues, Shoreline, Squaring Off, Clockwise Direction, Sound Masking, Sound Shadow
6. Roles of Other Senses in O&M Training

#### Week 03:

7. Orientation and Mobility for low vision children
8. Addressing orientation, mobility & educational needs of students with deaf-blindness

#### Week 04:-

9. Special Responsibilities of Special Teacher/Educator with reference to O&M Training
10. Blindfold -- Rationale and Uses for the Teacher

#### Week 05:

11. Sighted Guide Technique - Grip, Stance, Hand Position, Speed Control, Negotiating: Narrow Spaces, Seating Arrangements, Staircases, & Muddy paths
12. Pre Cane Skills - Upper and Lower Body protection, Room Familiarization, Using Oral Description for Orientation, Search Patterns, Building Map Reading Skills

#### Week 06 :

13. Cane Travel Techniques and Devices - Canes -Types, Parts, Six Considerations, Cane Travel Techniques: Touch Technique, Touch and Drag Technique, Diagonal Cane Technique, Use of Public Transport, Asking for Help: When and How & Electronic Devices, Tactile and Auditory Maps -- Description and Uses

#### Week 07:

14. Independent living skills - Meaning, Importance, Components
15. Training in Independent Living Skills - Self Care, Gait and Posture, Personal Grooming, Eating Skills and Etiquette, Identification of Coins and Currency Notes & Basics of Signature Writing
16. Daily living skills - assessment of needs and techniques of teaching age appropriate daily living skills
17. Sensory efficiency - importance and procedures for training auditory, tactile, olfactory, gustatory, kinesthetic senses and residual vision

#### Week 08:-

18. Techniques of teaching social interaction skills, leisure and recreation skills and self-determination
19. Adaptation of Physical education activities and Yoga
20. Adaptation of Games and Sports - both Indoor and Outdoor
21. Agencies/Organisations promoting - Sports, Culture and Recreation activities for the Visually Impaired in India - Indian Blind Sports Association, Chess Federation of India, Paralympic Committee of India, Abilympics, World Blind Cricket

### ABOUT INSTRUCTOR

- Master degree in Mathematics, Master of Special Education and Master of Philosophy in Education.
- Has 15 years of teaching experience both in inclusive school and at higher educational institution.
- Worked as project staff in the Indo-US Research Project on Response to Intervention Model in Indian Context.
- Has published 15 articles in both National and International level.





## DR. KRISHNA SANKAR KUSUMA

Assistant Professor (Sr. Grade), AJKMCR, Jamia Millia Islamia, N. Delhi

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 15 weeks (17/ 08/ 2018 to 30/ 11/ 2018)

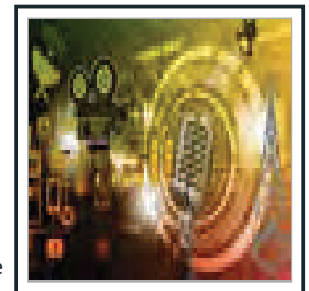
**EXAM DATE** : December 2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 1. UG students of any discipline for credit purpose. Students can choose this as part of CBCS.  
2. The course is also open to lifelong learners who want to enrich knowledge can also enrol; upon completion, participation certificate will be provided.

### OBJECTIVE OF COURSE

- Introduction to Audio-Visual Media is, designed to impart knowledge on three components of audio-visual media a) Radio b) Television c) Cinema/Film.
- The course covers both theory and practical elements of the three mediums.
- The lectures and supported text will help the students get not only the awareness of art and creation of media production but also various theories and issues in media studies.
- This course will help them to get the basic understanding of the above media.



### LEARNING OUTCOME

The Introduction to Audio-Visual Media course will orient the students to the aesthetic requirements of effective audio-visual communication.

After completing this course, students will be acquainted with the concepts of visual media from a critical point of view. Students are introduced to the necessary equipment and terminology of various stages of audio-visual production.

The course will equip the students to be familiar with the knowledge about audio-visual production techniques.

### COURSE PLAN

#### Week 01:

Historical Perspective of Radio, Characteristic of Radio, Amplitude Modulation and Frequency Modulation

#### Week 02:

Community Radio (Part-1), Community Radio (Part-2), Commercial Radio

#### Week 03:

Writing for Radio and Production Method, Cinema: Historical Perspective (Part-1), Cinema: A Historical Perspective (Part-2)

#### Week 04:-

Golden Age of Indian Cinema of Indian Cinema, Regional Cinema

#### Week 05:

Film Language and Grammar, Sound in Cinema, Film Industry in India Status Issues and Problems

#### Week 06:

Satellite and Cable Television, Broadcast Formats, Trends in Broadcasting

#### Week 07:

Commercial Television, Writing for Television News, Writing for Television (Documentaries, Interviews and Short Talks)

#### Week 08:-

Different Stages of TV and Film Production Process (Part-1), Different Stages of TV and Film Production Process (Part-2), Different Stages of TV and Film Production Process: Pre-Production (Script Writing)(Part-3)

#### Week 09:

Making of Documentary Film, Edit Points: Linear vs Non-Linear Editing

#### Week 10:

Basics of video editing, Chroma Key

#### Week 11:

Introduction to Digital video production, Mobile filming, Introduction to streaming media and live production

#### Week 12:

Images for the multiple digital media productions, Transmedia, storytelling, Immersive media AR/VR/MR

#### Week 13:-

User-generated Media content, Ethics of media production in digital domains

#### Week 14:

Media and Violence, Social Media and its impact

#### Week 15:

Media and Gender, Impact of Media on Children

### ABOUT INSTRUCTOR

- Working as a Sr. Assistant Professor at AJKMCR, Jamia Millia Islamia and has 14 years of teaching experience in the field of Mass Communication.
- Teaches Science Documentary, Communication Research, Theory, Mobile cinema, Advertising and Public Relations, Performance media and South Indian Cinema, New Media at AJK MCRC.
- He was also in charge of the CEC-UGC Educational programme production, MOOC's and Pathshala, SwayamPrabha (Channel-5).
- Completed Masters from Hyderabad Central University and his PhD from JamiaMilliaIslamia and worked with AJKMCR, he worked with CEDEC-NISWASS in Bhubaneswar, Orissa, Tezpur central university.







## LABANYA DATTA

Radio Jockey, Voiceover artist

**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 6 weeks (6/8/2018 to 11/9/2018)  
**EXAM DATE** : Tentatively Dec 2018.  
**NO OF CREDITS** : 2

**PRE-REQUISITES** : 10+2 with any background

### OBJECTIVE OF COURSE

- Structural understanding of the Broadcasting medium.
- Development and growth of Radio broadcasting in India: pre and post independence
- Learning the language used in the specific medium
- Technical knowledge regarding sound
- Digital technology
- Pre and post production
- Radio advertising



### LEARNING OUTCOME

The course has been drawn to provide the students the knowledge of Radio, as a medium. It provides understanding and concept development about Radio Broadcasting which includes the growth of radio, Grammar & aesthetics, understanding sound and production.

### COURSE PLAN

#### Week 1

- Module 1 : Wireless communication
- Module 2 : Development of Radio in India before Independence
- Module 3 : Development of AIR after Independence
- Module 4 : Coming of FM in India & Starting of Private FM channels

#### Week 2

- Module 5 : HAM Radio & Community Radio
- Module 6 : Comparative Analysis : All India Radio & Pvt FM channels
- Module 7 : Language of Radio
- Module 8 : Radio Journalism and its language

#### Week 3

- Module 9 : Genres of radio programmes
- Module 10 : Analysis of Spoken words
- Module 11 : Speak into me
- Module 12 : Expanding Circles

#### Week 4

- Module 13 : The Human Ear
- Module 14 : The Hearing Environment
- Module 15 : History of Sound Recording I
- Module 16 : History of Sound Recording II

#### Week 5

- Module 17 : Understanding the Digital Technology
- Module 18 : Radio pre- production & Radio advertising
- Module 19 : Digital Audio Recording
- Module 20 : Mixers

#### Week 6

- Module 21 : Creative use of sound for radio production
- Module 22 : Setting up of radio station : FM & Community

### ABOUT INSTRUCTOR

- Post Graduate from the department of Journalism and Mass Communication, University of Kolkata.
- Worked as a Radio Jockey for Radio Mirchi and currently works as a presenter for FM Rainbow and Gold (Western Music), All India Radio.
- Worked in Radio for nearly seven years.
- Worked as a sports journalist, and written for magazines.
- Completed Vani Certification from All India Radio, under (Ministry of Information & Broadcasting).





### IPSITA BARAT

Prof-in-charge Film Studies Dept. Assistant Professor,  
St. Xavier's College Kolkatta

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2

#### OBJECTIVE OF COURSE

- The course is an enriching and exciting journey, delving into various aspects of documentary cinema theory and filmmaking – ideation, research, scripting, and execution.
- The students will undergo an intensive creative process wherein the course will mentor their journey into the fascinating world of documentary cinema; learning through lectures and discussions that are formulated to develop a larger understanding of filming reality.

#### LEARNING OUTCOME

Besides Mass Communication, the course is designed keeping in mind students from diverse humanities background. After successful completion of this course, students will be enriched, enlightened and more confident about the subject.



#### COURSE PLAN

##### Week 1:

Module 01: Defining Documentary Films

Module 02: Modes of Documentary -Part I

Module 03: Modes of Documentary -Part II

Module 4: Modes of Documentary-Part III

##### Week 2:

Module 5: Documentary Kino-Eye

Module 6: British Documentary Movement

Module 7: Films of Pare Lorentz

Module 8: Approaches to Documentary Film Making-Part 1

##### Week 3:

Module 09: Approaches to Documentary Film Making-Part 2

Module 10: New Directions in 50s & 60s - (Part 1)

Module 11: New Directions in 50s & 60s - (Part 2)

Module 12: Documentary Part I

##### Week 4:

Module 13: Documentary Part 2

Module 14: Activism Documentary 1

Module 15: Activism Documentary 2

Module 16: Researching the Documentary

##### Week 05:

Module 17: Getting Ideas for Your Films

Module 18: Honing Your Interview Skills

Module 19: Storytelling in a Documentary

Module 20: Treatment

##### Week 6:

Module 21: Proposal Outline

Module 22: Preparing the Budget

Module 23: Scripting a Documentary

Module 24: Writing Narration

##### Week 7:

Module 25: Raising funds for A Film

Module 26: Production process - Requirements & Stages

Module 27: Overview of the Production Process

Module 28: Fine Cut–Editing Documentary

#### ABOUT INSTRUCTOR

- Registered as a PhD. scholar at Film Studies Dept. Jadavpur University, Kolkata.
- Holds a master degree from AJK Mass Communication and Research Centre (MCRC), Jamia Millia Islamia.
- Presented papers at various national and international conferences/ seminars.
- Research interest area is Media Industries, Production Cultures, Globalization and digital media.
- Expertise in Documentary Cinema.





## NILANJAN BANERJEE

Assistant Professor, Satyajit Ray Film & Television Institute Of India Department Of Producing For Film & Television.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE**: UG/PG/Diploma/Certificate/School

**COURSE DURATION** : 9 weeks (06/08/18 to 06/10/18)

**EXAM DATE** : NA

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 10+2

### OBJECTIVE OF COURSE

This particular MOOC is a self-learning module and the students are expected to devote 10 hours approximately per week, which will include thorough understanding of the module, participation in the discussion with the subject expert and also going through the list of papers and other references.

### LEARNING OUTCOME

- This course will orient the students with the basics of Film Movements.
- The students will be able to understand how cinema as an art form developed over the years.
- The course will enable the students to write a review on allied fields and that may be suitable for publication.



### COURSE PLAN

#### Week 01

- 1) Hollywood Classical: Continuity, 2) Hollywood Studio System
- 3) D. W. Griffith, 4) The Road to Citizen Kane, 5) Examining the Narrative

#### Week 02

- 6) Structuring with Music and Visual, 7) Citizen Kane and beyond
- 8) Time & Film Form, 9) Realism & Cinematic Narrative: Introduction
- 10) German Expressionism

#### Week 03

- 11) Italian Neo Realism, 12) Aesthetic of Neo-Realism, 13) The Cinema of Vittorio Dica, 14) The Cinema of Roberto Rossellini

#### Week 04

- 15) The Cinema of Luchino Visconti, 16) French New Wave: Rewriting Conventions, 17) The Rise of Nouvelle Vague, 18) Renoir & Bresson

#### Week 05

- 19) Jean Luc Godard : A New Wave, 20) Truffaut: The Innovator, 21) Concept of Auteur, 22) Akira Kurosawa

#### Week 06

- 23) A Phenomenon called Akira Kurosawa, 24) A Master arrives, 25) A complex narrative, 26) Narrative and beyond

#### Week 07

- 27) Realism of Satyajit Ray: Apu Trilogy, 28) Realism of Satyajit Ray: Urban Trilogy, 29) Envisioning Pather Panchali, 30) Analysing the Narrative

#### Week 08

- 31) Triumph of Collective Creativity, 32) Locating Pather Panchali in History, 33) Concept of Third Cinema, 34) Solanas & Getino: Towards a Third Cinema

#### Week 09

- 35) Feminist Film Theories - Basic Ideas, 36) Types of Non-Fiction Film Part-I, 37) Types of Non-Fiction Film Part-II

### ABOUT INSTRUCTOR

- A post graduate (diploma) in Direction & screenplay Writing from Satyajit Ray Film & Television Institute Of India.
- Teaching in SRFTI for last few years.
- Has been working in the film industry for last 17 years.
- Directed feature film, short films and documentaries.
- Has launched two production houses and produced and directed number of shows.





**SOUMYA SUVERA DAS**  
Teaching faculty at NSHM, Kolkata

**TYPE OF COURSE** : UG/PG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 7 weeks (6<sup>th</sup> Aug, 2018 to 21<sup>st</sup> Sep, 2018)  
**EXAM DATE** : Tentatively Dec, 2018  
**NO OF CREDITS** : 3

**PRE-REQUISITES** : 10+2 with any background

**OBJECTIVE OF COURSE**

- To give a brief of Communication Theory, Media & Society: Models and Processes' course will orient the students to the processes and socio-cultural, political and technological factors that intervene in disseminating messages.
- After completing this course, students will develop a critical and analytical faculty where they can discern, understand and interpret various media representations like news, films, music and new media messages.
- The course will equip the students to meet the academic demands facilitating in better understanding of the course they are pursuing.



**LEARNING OUTCOME**

• This course not only makes the curriculum easier to understand, but gives the student an edge as the module can be studied through audio visual representations and interaction with the respective faculty. The course is not only limited to archaic structure of syllabus, but has been updated to match the relevant issues of media and communication throughout the world. A theory presents a systematic way of understanding events, behaviours and/or situations.

**COURSE PLAN**

**Week 1:**

- Module 1 : Normative Theory
- Module 2 : Communicative Action of Jurgen Habermas - 1
- Module 3 : Communicative Action of Jurgen Habermas – 2
- Module 4 : Agenda Setting Theory

**Week 2:**

- Module 5 : The Hypodermic Needle Theory
- Module 6 : Two Step & Multi Step Model of Communication
- Module 7 : Play Theory
- Module 8 : The Selective Processes

**Week 3:**

- Module 9 : Individual Differences Theory
- Module 10 : Cultivation Theory
- Module 11 : Spiral of Silence
- Module 12 : Colonialism & Communication Part 1

**Week 4**

- Module 13 : Colonialism & Communication Part 2
- Module 14 : Key Concepts in Communication: Stuart Hall (Part 1)

- Module 15 : Key Concepts in Communication: Stuart Hall (Part 2)
- Module 16 : Models of Mass Communication: Aristotle's Classical Model

**Week 5:**

- Module 17 : Models of Mass Communication: Laswell's Model of Communication
- Module 18 : Shannon and Weaver's Model of Communication
- Module 19 : Wilbur Schramm's Models of Communication
- Module 20 : Gate-keeping Model of Communication

**Week 6:**

- Module 21 : Gerbner's Model of Communication
- Module 22 : Westley MacLean Model of Communication
- Module 23 : Development of Mass Communication
- Module 24 : Impact of mass communication

**Week 7**

- Module 25 : Barriers of Communication
- Module 26 : Uses and Gratifications Theory
- Module 27 : Reception Theory -An Introduction
- Module 28 : Reception Theory - Indian Film and Media

**ABOUT INSTRUCTOR**

- Media and film faculty and a research scholar researching on Indian Cinema and Land Relations from Jadavpur University.
- Teaches at NSHM, St. Xavier's College, The Bhawanipur Education Society College.
- Involved in Film Making.





**SUSHMITA PANDIT**

Assistant Professor Future Media School  
Kolkata

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2 with any background

**COURSE DURATION** : 9 weeks (6<sup>th</sup> Aug, 2018 to 21<sup>st</sup> Sep, 2018)

**EXAM DATE** : Tentatively Dec, 2018

**NO OF CREDITS** : 3

**OBJECTIVE OF COURSE**

- This course will orient the students with an understanding of media's role in society
- The students will develop a critical perception of basic concepts related to media and communication
- The course will familiarize the students with how media plays a pivotal role in the dissemination of culture.
- The course will enable the students to understand the icons and symbols used by media in influencing the public perception in society.



**LEARNING OUTCOME**

The course is designed in an interesting way to familiarize a student of mass communication or media studies with the basic concepts related to the discipline, so that, one can develop a critical understanding of media. After completion of the course, the students can automatically apply this knowledge in their fields of media research, higher education and industry.

**COURSE PLAN**

**Week 1**

Module 1 : Fundamentals of Communication

Module 2 : Introduction to mass communication

Module 3 : Making meaning: Verbal and nonverbal; connotative & denotative communication; Intra personal, inter personal and group communication

Module 4 : Seven Cs of Communication

**Week 2**

Module 5 : Language and Communication

Module 6 : Key Concepts in Communication: Marshal McLuhan 1

Module 7 : Marshal McLuhan 2

Module 8 : Dominant Paradigm and Media

**Week 3**

Module 9 : Dominant Paradigm and Media Part – 2

Module 10 : Diffusion of Innovation Theory

Module 11 : Functionalism and Marxist Media Theory Part – I

Module 12 : Functionalism and Marxist Media Theory Part – II

**Week 4**

Module 13 : Marxist Media Theory Part – III

Module 14 : Key Concepts in Communication: Frankfurt School 1

Module 15 : Key Concepts in Communication: Frankfurt School 2

Module 16 : Cultural imperialism theory

**Week 5**

Module 17 : Cultural Imperialism and Media

Module 18 : Cultural theory & its application (Part 1)

Module 19 : Cultural theory & its application (Part 2)

Module 20 : Index, icon, symbol, codes of visual representation

**Week 6**

Module 21 : Paradigmatic & syntagmatic

Module 22 : Key Concepts in Communication: Ideological State Apparatus 1

Module 23 : Key Concepts in Communication: Ideological State Apparatus 2

Module 24 : New Media-I

**Week 7**

Module 25 : New Media-II

Module 26 : The New Information Age

Module 27 : New Media the Indian Perspective

**ABOUT INSTRUCTOR**

- Serving as Assistant Professor in the department of Media Studies at Future Media School under West Bengal University of Technology.
- Cleared UGC -NET in Mass Communication and Journalism and is currently pursuing her doctoral research on television studies in the department of Film Studies, Jadavpur University.
- Has more than 7 years' experience as full time faculty in academics and more than 8 years, is actively engaged with the media industry.
- Working as a radio presenter at All India Radio.





## DR. KRISHNA SANKAR KUSUMA

Assistant Professor (Sr. Grade), AJKMCR, Jamia Millia Islamia, N. Delhi

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 15 weeks (17/08/2018 to 07/12/2018)

**EXAM DATE** : December 2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 1. UG students of any discipline for credit purpose. Students can choose this as part of CBCS. 2. The course is also open to lifelong learners who want to enrich knowledge can also enrol; upon completion, participation certificate will be provided.

### OBJECTIVE OF COURSE

- The primary objective of the MOOC on Advertising and Public relations is to introduce the learners to the basic concepts, tools, campaigns, strategies, application and many more aspects of fields of advertising and public relations.
- Students will be introduced to creating an advertising campaign and other relevant creative tools.
- Students will be given exposure to the various issues of advertising related to society.
- Students will also be given exposure to the role of PR in various organizations.



### LEARNING OUTCOME

Able to learn the concepts of Advertising and Public Relations, Able to identify tools and strategies of Public Relations, Learner will be able to understand advertising effectiveness and its impact on society, Understand the Advertising and Public Relations Campaign

### COURSE PLAN

#### Week 01:

Advertising Agency, An Introduction to Advertisement, Advertising and Market Research

#### Week 02:

Product Advertising, Target Audience, Brand Image Positioning, Types of Media and their selection in Advertising, Strategy Planning, Campaign Planning and Media Budgets

#### Week 03:

Advertising Strategies, Types of Advertising and Copywriting and Advertising Production Techniques, Legal and Ethical Issues in Advertising

#### Week 04:

How Different Types of Advertising Impact the Consumer, Integrated Marketing Communication, Copywriting Techniques for Different Media

#### Week 05:

Social Marketing and Advertising, Social Marketing and Advertising History of Advertising in India

#### Week 06:

History of Advertising in India, Campaign and their Evaluation, Advertising and Mass Media

#### Week 07:

Emerging Trends in Advertising, Copywriting and Advertising, Social and Economic Effects of Advertising

#### Week 08:

Public Relations, Definitions, Functions, History and Growth in India, PR Publicity

Propaganda and Public Opinion, Public Relation Techniques

#### Week 09:

Public Relations and Crisis Management, Public Relation and Advertising, Tools of PR for Interaction with Media

#### Week 10:

Defence PR (Public Relations) 1, Defence PR (public Relations) 2  
Qualities of PRO

#### Week 11:

Financial PR and investor relations, PR Management and Organizational Structures, Campaign planning for Public Relations

#### Week 12:

Customer and Employee Relations and PR, Shareholder relations and dealer relations, PR for Political Party

#### Week 13:

Stages of Public Relation, PR and new media technology, Emerging Trends in PR

#### Week 14:

PR as a Management Function, PR and NGO Management, Corporate Social Responsibility, PR in Hospitals

#### Week 15:

International Public Relation, Tools and Techniques in PR, Code and Ethics for Public Relations

### ABOUT INSTRUCTOR

- Working as a Sr. Assistant Professor at AJKMCR, Jamia Millia Islamia.
- Expertise Science Documentary, Communication Research, Theory, Mobile cinema, Advertising and Public Relations, Performance media and South Indian Cinema, New Media at AJK MCRC.
- Has 14 years of teaching experience in the field of Mass Communication.
- Served as In-charge of the CEC-UGC Educational programme production, MOOC's and Pathshala, Swayam Prabha (Channel-5).
- Completed his Masters from Hyderabad Central University and PhD from Jamia Millia Islamia.
- Worked with CEDEC-NISWASS in Bhubaneswar, Orissa, Tezpur central university.
- Taught at College of Applied Sciences, Oman.





### SAAYAN CHATTOPADHYAY

Assistant Professor Department of Journalism & Mass Communication  
Baruipur College

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2 in any stream

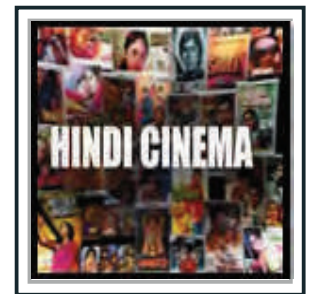
**COURSE DURATION** : 5 weeks (6<sup>th</sup> Aug, 2018 to 7<sup>th</sup> Sep, 2018)

**EXAM DATE** : Tentatively Dec, 2018

**NO OF CREDITS** : 2

#### OBJECTIVE OF COURSE

- The course will develop a critical understanding of Hindi cinema.
- The students will learn about the early history of Hindi films and the historical significance of the Studio Era in India.
- The course will help students to understand the ideology behind popular cinema.
- The students will become familiar with particular cinematic style and thematic concerns in Hindi cinema.
- The course will facilitate the students to appreciate the films of eminent Hindi filmmakers.



#### LEARNING OUTCOME

This course critically analyses Hindi films and discusses the historical, technical and aesthetic aspects of Hindi cinema. Hindi cinema, as an archetype of popular cinema, not only enjoys a wide national and international distribution but also dominates the discourse about Indian cinema globally. This course, with reference to a wide range of Hindi films and filmmakers, will prepare the students to a more nuanced understanding of popular Hindi films.

#### COURSE PLAN

##### Week 1

Module 1 : Historical Overview: Studios in India

Module 2 : V Shantaram and Prabhat Studios

Module 3 : Indian Cinema: From Madan to Phalke

Module 4 : Early Indian Silent Cinema

Module 5 : Studio Era and Talkies -- Pre- independence period

##### Week 2

Module 6 : Indian Cinema: Cinemas of 1940s

Module 7 : Mehboob Khan

Module 8 : Post- independence Hindi Cinema- Cinema of Raj Kapoor & Guru Dutt)

Module 9 : Raj Kapoor

Module 10 : Guru Dutt

##### Week 3

Module 11 : The Angry Young Man

Module 12 : Rise of a New Hero

Module 13 : Bimal Roy

Module 14 : Hrishkesh Mukherjee

Module 15 : Shyam Benegal

##### Week 4

Module 16 : Kumar Sahani

Module 17 : Saeed Mirza

Module 18 : Mani Kaul

Module 19 : Cinema Post Liberalization: What is Bollywood?

Module 20 : Bollywood & Liberalization

##### Week 5

Module 21 : Bollywood Narratives

Module 22 : Bollywood: Diversity in Narrative & Form under Globalization

Module 23 : Melodrama & Cinematic Narrations

Module 24 : Melodramatic Imagination in Indian Cinema

Module 25 : Reception Theory: Indian Film & Media

#### ABOUT INSTRUCTOR

•Assistant Professor and Head of the department of Journalism and Mass Communication at Baruipur College, affiliated to Calcutta University, Kolkata.

•Has more than ten years experience in teaching film and media studies.

•Has published articles in Studies in South Asian Film and Media, Journalism Practice, South Asia Research.

•Has also contributed chapters on film and media in books published from Palgrave Macmillan, Routledge, Springer, Sussex Academic Press, among others.





### ANINDYA SENGUPTA

Assistant Professor, Department of Film Studies,  
Jadavpur University, Kolkata

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 7 weeks (6<sup>th</sup> Aug, 2018 to 21<sup>st</sup> Sep, 2018)

**EXAM DATE** : Tentatively Dec, 2018

**NO OF CREDITS** : 3

**PRE-REQUISITES** : 10+2 (any stream)

#### OBJECTIVE OF COURSE

- This course will introduce the student to important aspects of film-art and film-language.
- On successful completion of the course, the student will be able to appreciate the cinematic medium in a more knowledgeable way.
- This course will also enable them to apply the acquired knowledge in the fields of narrative and visual arts.
- It will enable them to write reviews of films and research-essays on allied fields and that may be suitable for publication.



#### LEARNING OUTCOME

This course will introduce the students to the language of cinema, one of the younger and probably most dynamic and eclectic art-form of the modern eras. Cinema is particularly unique as simultaneously being a scientific innovation, a medium of artistic expression, an important component of culture industry and a dominant mode of entertainment. It is also a precursor of sorts, because later media like television, video-games, virtual reality and audio-visual media in the internet is also highly derivative of it.

#### COURSE PLAN

##### Week 1

Module 1 : Language of Cinema: An Introduction

Module 2 : Basic Components in Film Language: Shot, Scene, Sequence

Module 3 : Shot Scale and the Use of Lens

Module 4 : Camera Position & Camera Angle

##### Week 2

Module 5 : Film Editing

Module 6 : Continuity Editing Part -I

Module 7 : Continuity Editing Part - II

Module 8 : Shot Breakdown & Storyboarding

##### Week 3

Module 9 : Eisenstein: Montage of Attractions

Module 10 : Eisenstein: Montage of Collision

Module 11 : Mise-en-Scene

Module 12 : Composition: Normative

##### Week 4

Module 13 : Mise-en-Scene & the Auteurs

Module 14 : Components of Film Sound

Module 15 : Sound and Image

Module 16 : Music and Image

##### Week 5

Module 17 : Theory of Film Sound

Module 18 : Sound & Continuity

Module 19 : Coming of Sound Part I

Module 20 : Coming of Sound Part II

##### Week 6

Module 21 : Colour and Meaning in Cinema

Module 22 : Lighting and Graphics

Module 23 : Approaches to Film Genre

Module 24 : Genre Bending, Genre Mixing: An Introduction

##### Week 7

Module 25 : Idea to Script Part - I

Module 26 : Idea to Script Part - II

Module 27 : Script for Feature Film

#### ABOUT INSTRUCTOR

- Assistant Professor at the Department of Film Studies, Jadavpur University.
- Post-graduation in English, second post-graduation degree in Film Studies at Jadavpur University.
- Pursuing PhD dissertation on the Cinematic Authorship and Cinema of Satyajit Ray.
- Regular contributor of essays on cinema, culture and media in different academic and semi-academic journals.







**PROF. FARHAT BASIR KHAN**  
Professor, AJK MCRC, Jamia Millia Islamia, N. Delhi

**TYPE OF COURSE** : Certificate  
**COURSE DURATION** : 37 Modules (6<sup>th</sup> Aug to 30<sup>th</sup> Nov, 2018)  
**INTENDED AUDIENCE** : Under Graduate, Post Graduate, Diploma  
**EXAM DATE** : Yet to be decided  
**NO OF CREDITS** : 4  
**PRE-REQUISITES** : Good command on English language to follow video lectures in English and comprehend the study material; access to internet; interest in mass media. Students have to devote 6 to 8 hours of study time per week, which would include time for assignments and quizzes composed of multiple choice questions.

### OBJECTIVE OF COURSE

- To educate students about the evolution and growth of print, broadcast and new media in India and simultaneously give insights about the models, theories and practices prevalent in the fields of mass communication.
- To facilitate a comprehensive understanding of the dynamics of mass media and applicability of mass communication models and theories in praxis.
- To create a rich knowledge base about the media laws like intellectual copy rights with special emphasis on copyright laws, right to free press and rights given to the journalists.



### LEARNING OUTCOME

- This course is designed to create a foundational theoretical base about the historic and contemporary developments in the field of mass communication in India and the world at large.
- The discourse will allow students to delve into history of print, broadcast and new media in India as well as techniques of researching audiences using qualitative and quantitative methodological tools.

### COURSE PLAN

- Module 01:-** History of Communication in India
- Module 02:-** Early Communication Systems in India
- Module 03:-** Introduction to Communication
- Module 04:-** Communication Functions
- Module 05:-** Types of Communication
- Module 06:-** Nature of Mass Communication
- Module 07:-** Mass Communication Audience
- Module 08:-** Linear Communication Models
- Module 09:-** Non-Linear Communication Models
- Module 10:-** Theory and Research Traditions
- Module 11:-** Mass Communication Theories
- Module 12:-** Media Effects Theories
- Module 13:-** Normative Theories of Press
- Module 14:-** Mass Media and Society
- Module 15:-** Role of Media in Democracy
- Module 16:-** History of Writing
- Module 17:-** History of Printing (Newspapers)
- Module 18:-** History of Indian Print Media
- Module 19:-** Print Media in 19th century

- Module 20:-** Print Media in India
- Module 21:-** Starting a Newspaper
- Module 22:-** Types of Newspapers
- Module 23:-** Organizational Structure of Newspapers
- Module 24:-** Newspaper Ownership in India
- Module 25:-** Critical Issues in Newspaper Ownership
- Module 26:-** Newsroom Functioning
- Module 27:-** Types of Magazines
- Module 28:-** Books and Communication
- Module 29:-** Book Publishing in India
- Module 30:-** Public Information Agencies
- Module 31:-** Press Commissions & Agencies
- Module 32:-** Press Information Bureau
- Module 33:-** Media Unions in India
- Week 34:-** Marketing Practices in Print
- Module 35:-** Indian Print Media: Overview
- Module 36:-** Introduction to Media Research
- Module 37:-** Media Research Methodologies

### ABOUT INSTRUCTOR

- Senior faculty of AJK MCRC.
- Served on several prestigious positions including the Maulana Abdul Kalam Azad Chair Professor of Media and Communication, Professor and coordinator of Mass Communication.
- Has served as a member of IBC Amsterdam & Indian National Photo Awards.
- Has been instrumental in bringing the prestigious Sony World Photography Award to India, beating 60 global universities across the world.
- Has the unique distinction of producing the fifty-year commemorative audio-visual for UNICEF India and WHO.





### DR. JAGDISH SINGH

Associate Professor, College of Physical Education,  
Punjabi University, Patiala (Pb.)

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2

**COURSE DURATION** : 6 weeks (07-09-2018 & 22-10-2018)

**EXAM DATE** : 06-11-2018 (Tentative)

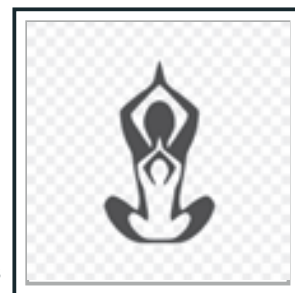
**NO OF CREDITS** : 2

#### OBJECTIVE OF COURSE

- To throw light on the risk of injury and augments recovery for ailments including stress, lower back pain and tension.
- To discuss the features of different Yoga and Yoga Asana.
- To enable the student to have good health.
- To practice mental hygiene.
- To possess emotional stability.

#### LEARNING OUTCOME

Students shall be able to improve the health, performance and mental acuity of athletes or individuals interested in improving their level of fitness. With the help of this course students can reduce the risk of injury and augments recovery for ailments including stress, lower back pain and tension. Yoga is a gift for body and mind. It can prepare the students physically and mentally for the integration of their physical, mental and spiritual faculties so that the students can become healthier, saner and more integrated members of the society and of the nation.



#### COURSE PLAN

##### Week 01:-

Introduction of Yoga

Types of Yoga

Ashtang Yoga-1

Ashtang Yoga-2

##### Week 02:-

Pranayam -1

Pranayam -2

Pranayama-Suryabhedhi, Ujjai Bhastrika

Pranayams

##### Week 03:-

Pratyahara and Dhayan

Niyama

Yoga Asana Part-1

Yoga Asana Part-2

##### Week 04:-

Yoga Asana Part-3

Yoga Asana Part-4

Yoga Asana Part-5

Yoga Asana Part-6

Yoga Asana Part-7

##### Week 05:-

Yoga Asana Part-8

Hath Yoga and Dhauthi Kriya

ShudhiKriya – Part 1

ShudhiKriya – Part 2

Bandha and Mudra Part-I

##### Week 06 :-

Bandha and Mudra Part-2

Educational Values of yoga

Role of Physical Education and Sports

Relevance of Yoga in the Modern

Difference Between Yoga and Non- Yogic Exercise

#### ABOUT INSTRUCTOR

- Working as Associate Professor, College of Physical Education,
- Punjabi University, Patiala.
- Has 21 year teaching experience.
- Served as Badminton coach for 8 years with sports department Chandigarh and produces many players of National and International fame.
- Has presented more than 15 research papers in National and International conferences.



**DR. (CS) RAVI AHUJA**

Assistant Professor, Skill Development Centre,  
SavitribaiPhule Pune University

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/certificate

**COURSE DURATION** : 10 weeks (2 July to 8 Sept. 2018)

**EXAM DATE** : 30 Sept. 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 1.Any bonafide student of approved college / institution / university in India (Ideally after Class XII)  
2. Any citizen of India keen to learn about Management.

**OBJECTIVE OF COURSE**

- The Objectives of the programme are to acquaint -:
- Learners about the concept of business management.
- Learners about the various function of management.
- Learners about the recent trends in business management

**LEARNING OUTCOME**

This course of basics in management is aimed to orient learners about management and its various functions. After completing the course participants will be able to –  
Understand the concept of Management and its various functions. Plan and execute effectively. Understand the need of forecasting. Visualize the organization structure, its need and importance. Learn importance of communication, leadership and motivation.

**COURSE PLAN**

**Week 01:-** Concept, Nature, Terms and Levels of Management, Management Skills

**Week 02:-** Professional Management, Scientific Management, Contribution by Henry Fayol to Management thoughts, Planning

**Week 03:-** Business Forecasting, Techniques of Forecasting, Decision Making

**Week 04:-** Types of Organizational Structure, Delegation of Authority, Centralization Vs Decentralization

**Week 05:-** Need of Staffing, Concept of Recruitment, e- Recruitment,

**Week 06:-** Directing & Communication in Organization, Techniques, Process of Communication as Management Function, Barriers to Communication, Motivation

**Week 07:-** Leadership: Meaning and Nature, Effective Leadership, Leadership Styles

**Week 08:-** Mahatma Gandhi - An Efficient Manager, Pandit Jawaharlal Nehru - The Journey of a Prime Minister, Dr B R Ambedkar's Contribution to Indian Constitution, Co-ordination

**Week 09:-** Techniques of Co- ordination, Control, Control Function, Business Ethics

**Week 10:-** Corporate Social Responsibility, Corporate Governance, Disaster Management, Management of Change

**ABOUT INSTRUCTOR**

- Faculty at Skill Development Centre,
- Savitribai Phule Pune University.
- M.Com, SET (Commerce), MBA (Operations Management), GDC& A, CS, Ph.D.
- Designed 4 credit skilled based syllabuses for faculty of commerce
- Coordination of Conduction of Skill based activities at affiliated colleges.
- Coordinator, Departmental Internal Quality Assurance Cell (IQAC)
- University Representative, Community Colleges affiliated to University
- Project Coordinator-“Free Coaching and Allied Scheme for Minority students” for offering skill based courses for employment in private sectors.
- Coordinator: Soft Skills Development Programme of SPPU for three affiliated district colleges.
- Project Coordinator: “DeenDayalUpadhyayKaushal Kendra” UGC funded scheme.
- Involved in development of e-content for commerce and management subjects. Till date 100+ programmes have been scripted and recorded with support of EMRC, Pune and CEC, New Delhi





**DR. RAVI AHUJA**

Assistant Professor, Skill Development Centre,  
Savitribai Phule Pune University

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/certificate

**COURSE DURATION** : 8 weeks (10 Sep to 03 Nov 2018)

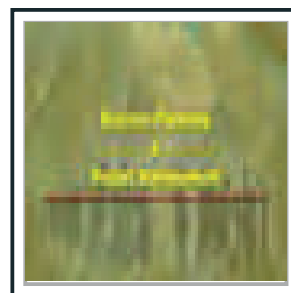
**EXAM DATE** : 30 Sept. 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 1.Any bonafide student of approved college / institution / university in India (Ideally after Class XII)  
2.Any citizen of India keen to learn about Business Planning and Project Management.

### OBJECTIVE OF COURSE

- This Course of Business Planning and Project Management aim to sensitize learners about the concept of planning in general and business planning specifically.
- The course would also give insights the learners about successfully managing projects.



### LEARNING OUTCOME

This course of business planning and project management is aimed to orient learners about planning process in businesses and familiarize them with the concept and functions of project management along with various good practices in the domain. After the completion of course participants will be able to Understand the concept of Planning and its importance for Businesses, Understand the concept of Project and importance of its management, Critically examine which project needs to be undertaken using various models, Understand the importance of human resources for the projects, Learn the concept of project audit, project life cycle and project termination process.

### COURSE PLAN

**Week 01:-** Introduction to Planning, Advantages and Limitations of Planning, Essentials and Obstacles in Business Planning

**Week 02:-** Forecasting: Definition, Importance and Techniques, Introduction to Project Management and Project Life cycle

**Week 03:-** Project Management Maturity, Project Selection Models, Types and Criteria of Choice, Project Portfolio Process

**Week 04:-** Project Manager and Organisation Structures for Project Management

**Week 05:-** Choosing the Project Team in Functional Organisation, Project Organisation and Matrix Organisation, The Nature of Negotiation, Conflict and Project Life Cycle, Estimating Project Costs

**Week 06:-** PERT and CPM – Part 1 and 2, Risk Analysis Using Simulation, Critical Path Method & Crashing the Project, Resource Allocation Problem, The Planning - Monitoring - Controlling Cycle, Information Needs and the Reporting Process

**Week 07:-** Earned Value Analysis, Fundamental Purposes of Project Control, Three Types of Control Processes, Design of Control Systems, Purposes of Evaluation

**Week 08:-** Organisational Goals & Control System, Audit: Construction and Uses, Some Essentials of an Audit, Project Audit Life Cycle, Varieties of Project Termination, Termination Process

### ABOUT INSTRUCTOR

- Faculty at Skill Development Centre,
- Savitribai Phule Pune University.
- M.Com, SET (Commerce), MBA (Operations Management), GDC& A, CS, Ph.D.
- Designed 4 credit skilled based syllabuses for faculty of commerce
- Coordination of Conduction of Skill based activities at affiliated colleges.
- Coordinator, Departmental Internal Quality Assurance Cell (IQAC)
- University Representative, Community Colleges affiliated to University
- Project Coordinator-“Free Coaching and Allied Scheme for Minority students” for offering skill based courses for employment in private sectors.
- Coordinator: Soft Skills Development Programme of SPPU for three affiliated district colleges.
- Project Coordinator: “DeenDayalUpadhyayKaushal Kendra” UGC funded scheme.
- Involved in development of e-content for commerce and management subjects. Till date 100+ programmes have been scripted and recorded with support of EMRC, Pune and CEC, New Delhi





### MRS. BAGESHREE DEO

faculty, Brihan Maharashtra College of Commerce  
(BMCC)Pune

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/certificate

**COURSE DURATION** : 10 weeks (02-07-2018 to 08-09-2018)

**EXAM DATE** : 30 September 2018

**NO OF CREDITS** : 3

**PRE-REQUISITES** : Any bonafide student of approved college / institution / university in India (Ideally after Class XII)  
Any citizen of India keen to learn about various aspects of Business Communication.

#### OBJECTIVE OF COURSE

- Will acquaint learners with the basic skills and techniques of business communication.
- To explain learners with the importance of a good body language.
- To introduce learners about use of various new technologies in communication in different sectors.
- To enable learners with good writing skills for business correspondence.

#### LEARNING OUTCOME

- Enable the student to recognize the relationship of effective communications skills to success in academic, work and social environments.
- Develop both written and oral communication skills to produce clear, complete, accurate messages.
- Understand message strategies and formats appropriate for professional communication situations.
- Develop and apply critical thinking skills when determining solutions for communication-related problems.



#### COURSE PLAN

**Week 01**:- Introduction to Communication

**Week 02** :- Types of Office Communication

**Week 03** :- Business Correspondence

**Week 04** : - Business Correspondence

**Week 05** : - Business Letters

**Week 06** : - Business Letters

**Week 07** : - Business Letters

**Week 08** : - Business Letters

**Week 09** : - Office Meetings

**Week 10** : - e-Communication

#### ABOUT INSTRUCTOR

- Working as a faculty of BBA, BCA, BBM at BMCC, Pune.
- Worked as MCM faculty and Placement Officer at Marathwada MitraMandal's IMERT- B school, Pune.
- Worked as a faculty at Indsearch, Pune.
- Presented papers at International and National Research Conferences.



**DR. GIRIJA SHANKAR**

Professor, I/C Principal and Head, Dept. of Business Economics at Ness Wadia  
College of Commerce, Pune, Maharashtra

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/certificate

**COURSE DURATION** : 6 weeks (06 Aug to 15 Sep 2018)

**EXAM DATE** : 07 October 2018

**NO OF CREDITS** : 2

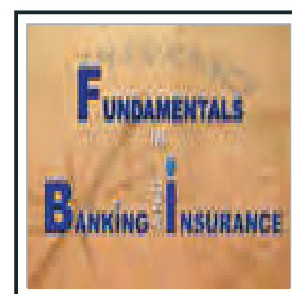
**PRE-REQUISITES** : 1.Any bonafide student of approved college / institution / university in India (Ideally after Class XII)  
2.Any citizen of India keen to learn about Fundamentals of Banking and Insurance.

**OBJECTIVE OF COURSE**

- To acquaint the learners about concept of bank and its operations
- To acquaint the learners about use of various technologies used in banking sector.
- To acquaint the learners about the concept of insurance and its various types.

**LEARNING OUTCOME**

1. Will be equipped with an understanding of the rudimentary aspects of Banking and Insurance.
2. Will be able to engage with one of the fastest growing sectors of the economy.
3. Will kindle interest towards a deeper understanding of Banking and Insurance.
4. Will enable skill enhancement.
5. Will be able to explore various job opportunities.

**COURSE PLAN**

**Week 01:-** Introduction

**Week 02:-** Deposit Accounts

**Week 03:-** Lending Principles and Negotiable Instruments

**Week 04:-** Technology in Banks

**Week 05:-** Introduction to Insurance

**Week 06:-** Insurance in the Contemporary Context

**ABOUT INSTRUCTOR**

- Member Board of Studies (Business Economics), S.P. Pune University. [2005 to 2010 and 2010 to 2015.]
- Member Board of Studies (Banking & Finance), S.P. Pune University [2010 to 2015].
- Member Board of Studies (BBA – International Business) February 2016 to 2018.
- Subject Expert (Subject: Banking and Finance) under Faculty of Commerce & Management, Savitribai Phule Pune University, Pune on the Research and Recognition Committee, November, 2017 to October, 2019.
- Member – Board of Studies (2016-2021) – Subject: Research Methodology for Business, St. Mira's College for Girls (Autonomous) Pune.





### DR. SWETA SANJOG METHA

Assistant Professor, Chintamanrao Institute of Management Development and Research (CIMDR), Sangli

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/certificate

**COURSE DURATION** : 8 weeks (02 July 2018 to 25 Aug 2018)

**EXAM DATE** : 02 Sept 2018(Tentative)

**NO OF CREDITS** : 4

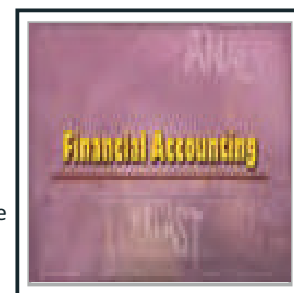
**PRE-REQUISITES** : Any bonafide student of approved college / institution / university in India (Ideally after Class XII)  
Any citizen of India keen to learn about various aspects of Information Technology.

#### OBJECTIVE OF COURSE

- To introduce learners about the concept of accounting in general and financial accounting in specific
- Disseminating various accounting principles, standards, concepts and conventions.
- Telling Learners about the concept of depreciation and its various facets
- Acquainting Learners about the analysis of financial statements- their purpose and use.

#### LEARNING OUTCOME

1. To understand systematic process of bookkeeping designed based on Generally Accepted Accounting Principle
2. To learn the procedure of bookkeeping
3. To understand the concept and importance of Bank Reconciliation statement.
4. To understand accounting system followed by consignor and consignee
5. To understand accounting treatment of depreciation and different methods of depreciation



#### COURSE PLAN

**Week 01**:- Role of Finance in Business, Basic Concepts and Conventions in Financial Accounting, Accounting Standards

**Week 02** :- Generally Accepted Accounting Principles, Accounting Process, Journal Entries, Profit and Loss Accounts, Balance Sheet

**Week 03** :- Tally System, Banking Reconciliation Statement

**Week 04** : - Consignments, Joint Ventures - Accounting Procedures,

**Week 05** : - Inland Branches , Depreciation Accounting,

**Week 06** : - Methods of Depreciation, Accounting for Hire Purchase Transactions

**Week 07** : - Partnership - Introduction and Types, Accounting for Simple Dissolution, Analysis of Financial Statements

**Week 08** : - Common Size Balance Sheet, Ratio Analysis, Cash Flow Statement

#### ABOUT INSTRUCTOR

- (B.Com, M.B.A., Ph.D)
- Has an expertise in Subjects like Accounting for managers, Financial Management, Marketing Management (compulsory & electives), Research Methodology, Entrepreneurship development, Agriculture Management.
- Has developed and delivered e-content through EMRC, Pune for UGC CEC.





## ASHISH ANNASHEB NIKAM

Programme Coordinator (Equivalent to Assistant Professor)  
Skill Development Centre, Savitribai Phule Pune University

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG/certificate

**COURSE DURATION** : 06 weeks (06-Aug-18 to 15-Sep-18)

**EXAM DATE** : 14 Oct 2018(Tentative)

**NO OF CREDITS** : 2

**PRE-REQUISITES** : 1. Any bonafide student of approved college / institution / university in India (Ideally after Class XII)  
2. Any citizen of India keen to learn about Management.

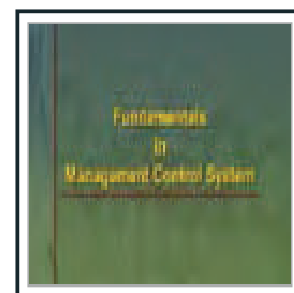
### OBJECTIVE OF COURSE

- To acquaint learners about the concept of management control, its types and characteristics.
- To enable learners about the use of management control systems in various functional areas of businesses.
- To Introduce the learners about the management aspect of control systems.

### LEARNING OUTCOME

This course of management control system is to provide learners with concept and function of management control, its nature, functional areas and techniques. This course provides students the opportunity to understand:

- The concept of management control, its types and characteristics.
- The importance of Management Control Systems and its fundamentals.
- The use of management control systems in various functional areas of businesses.
- The management aspect of control systems.
- The Role of Management Information System (MIS) and computers for management control purpose.
- Project control and methodologies for implementing management controls systems for various centres, professional and nonprofessional organizations.



### COURSE PLAN

**Week 01:-** Supervision, Management & Controlling, Control Factors & Managerial Philosophy, Meaning and Designs of MCS

**Week 02:-** Meaning & Types of Information, MIS in Accounting Information, MIS & Operations Information System, MIS in Marketing Information System

**Week 03:-** Management Control System: Introduction and Application, Need for Production Control, Classification of Inventory

**Week 04:-** Marketing Control system, Kind of Control Devices, Computers for Management Control Purposes

**Week 05:-** Decision Support Systems, Expert Systems, Management Control of Projects, Project Planning

**Week 06:-** Project Control, Roles and Responsibilities in Implementing Control Systems, Management Control Structure - Responsibility Centre, MCS in Service and Non Profit Organizations

### ABOUT INSTRUCTOR

- B.E (COMP SCIENCE & ENGG), M.TECH (COMPUTER ENGG),
- PH.D (Computer & Information Technology) Pursuing
- Specialization: Computer Engineering
- Total teaching experience: 11 years 10 Months.
- No of Paper Presented /Published in the International Conference/Journals: 03
- Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.







## DR MEETA NIHALANI

Associate Professor in Faculty of Commerce & Management  
Jai Narain Vyas University Jodhpur

**TYPE OF COURSE** : UG, Certificate

**INTENDED AUDIENCE**: UG Certificate School

**COURSE DURATION** : 12 weeks (16-Aug-18 to 16-Nov-18)

**EXAM DATE** : December 2018(Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Higher secondary exam in Commerce.

### OBJECTIVE OF COURSE

- To bring out the Conceptual framework of marketing, Product and service innovation for development and modification
- To enable decision making ability of students to connect with take ethical aspects of selling products in the interest of society
- Bringing out the Insights of self based assessments to plan personal plans for improving marketing skills.
- To teach Design and manage systems which are responsive to national and international issues of developing global markets in a sustainable way.

### LEARNING OUTCOME

After completing this course, the students will be empowered to build an updated ability of taking marketing decisions in a quick way. They will understand the ethical aspects of business and will be able to build sustainability of resources in the interest of environment and ecosystem. The standard of living of any economy can be enhanced if the students are empowered to take right and accurate decisions for connecting with the growth options prevalent in any country.

### COURSE PLAN

#### Week 1:

1. THE IMPACT OF ENVIRONMENT ON MARKETING-1 ( UNIT 1)
2. THE ADVERTISING PROCESS 3 (UNIT 1)
3. ETHICS OF SALES PRESENTATION 4 UNIT 1

#### Week 2:

1. CONSUMER BEHAVIOUR – 1 UNIT 2
2. CONSUMER BEHAVIOUR – 2 UNITS 2
3. INTRODUCTION TO MARKETING 2 UNIT 2

#### Week 3:

1. SALES FORCE -4 UNITS 2
2. MOTIVATION AND SALES 5 UNITS 2
3. TERRITORY MANAGEMENT 6 UNIT 2

#### Week 4:

1. COMMUNICATION IN SALES -7 UNITS 2
2. PRODUCT KNOWLEDGE 8 UNIT 2
3. CUSTOMER KNOWLEDGE 9 UNIT -2

#### Week 5:

1. EVALUATING THE PERFORMANCE OF SALES PEOPLE 10 UNIT 2
2. TRAINING GIVEN TO FIELD SALESMAN 11 UNITS -2
3. FACTORS IMPACTING RELATIONSHIP OF CLIENTS WITH AGENCIES 3 UNIT 3

#### Week 6:

1. PRODUCT - CONCEPT, PLANNING AND PACKAGING UNIT-3
2. PRODUCT LIFECYCLE AND BRAND MANAGEMENT UNIT 3
3. IMPORTANCE OF PRICE AND FACTORS IMPACTING PRICING OF PRODUCTS UNIT 4

#### Week 7:

1. CHANNELS AND FACTORS IMPACTING CHOICE OF CHANNELS UNIT
2. TRANSPORTATION WAREHOUSING AND INVENTORY MANAGEMENT UNIT 4
3. ADVERTISING UNIT 5

#### Week 8:

1. LOCATION MANAGEMENT FOR THE RETAIL SECTOR UNIT 5
2. RETAIL TRENDS UNIT 5
3. ADVERTISING AGENCIES UNIT 6

#### Week 9:

1. ADVERTISING APPEALS UNIT 6
2. PRINT ADVERTISEMENT UNIT 6
3. IMPACT OF ADVERTISING ON SOCIETY UNIT 6

#### Week 10:

1. CLIENT RELATIONSHIP MANAGEMENT UNIT 6
2. TYPES OF ADVERTISING UNIT 6
3. INTRODUCTION TO ADVERTISING UNIT 6

#### Week 11:

1. BASICS OF COMMUNICATION UNIT 6
2. ADVERTISING AND COMMUNICATION UNIT 6

#### Week 12:

Term End Exam & Credit Achievement, Term End Exam will be conducted as the guidelines of Annexure IVth of 95 Co ordination committee Meeting of CEC, The assessment process for achieving credits is as follows:

40 percent marks can be obtained by online assessments and 60 percent by proctored exam

There are 10 marks for each online video. The bifurcation is as follows:

•1 mark for completing reading,

1 mark for watching video,

1 mark for forum participation,

7 marks from MCQ's and assignments given

The 40 percent contribution in credit achievement will be done, averaging the total achieved by watching all the 32 videos at the end of the session

### ABOUT INSTRUCTOR

- Completed the prestigious project UGC Major Research Project on Eco tourism.
- Accounted with more than 200 publications in various journals and books.
- Working academically for past 25 years and served as member of academic council of the university, also in Board of Management in EMRC.



# Natural and applied science Courses

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**DR VISHAL GOYAL**

Associate Professor, Department of Computer Science,  
Faculty of Computing Science,  
Punjabi University, Patiala

<b>TYPE OF COURSE</b>	: UG	<b>COURSE DURATION</b>	: 7 weeks (10/09/2018 & 31/10/2018)
<b>INTENDED AUDIENCE</b>	: UG/PG/Diploma/Certificate/ School	<b>EXAM DATE</b>	: 1/12/2018
<b>PRE-REQUISITES</b>	: The students should have enough knowledge of English as the teaching pedagogy in the video lectures is in English and comprehend the study material; enough knowledge in English to do the assignments; access to the internet; interest in Cyber Security / Information Security.		

**OBJECTIVE OF COURSE**

This course is designed to provide fundamental skills needed to understand cyber law concepts such as trademark, copyright, patents, digital rights, computer crimes, privacy issues, hacking and prosecution etc. Given the rapid changes in technology, and the corresponding changes in crime and the law, the course will regularly include discussions of current events.

**LEARNING OUTCOME**

Students who successfully complete this class will be able to:

Describe laws governing cyberspace

Discuss different types of cybercrimes and analyse legal frameworks to deal with these cybercrimes

Identify intellectual property rights issues in the cyberspace

Recognise the importance of digital evidence in prosecution

**COURSE PLAN**

Here the course coordinator has to provide the brief course plan covered in the week

**Week 01:** Cyber Crime: An Overview

Week 01: Basic Concepts regarding Computer System

Week 01: Cyber Law and Components of Cyber Law

Week 01: Definitions of Information Technology Act, 2008

Week 01: Internet and its Advantages and disadvantages

**Week 02:** Network and Network Security

Week 02: Instrument of Trust: Electronic Signature Certificate

Week 02: Interception and Monitoring of Electronic Communication

Week 02: E-Commerce

Week 02: E-Governance

**Week 03:** E-records and E-contract

Week 03: Regulations of Certifying Authority

Week 03: Cyber Appellate Tribunal

**Week 04:** Cyber Jurisdiction

Week 04: E-Consumer

Week 04: Threat of Privacy in Cyber Age-Need for an Effective Veil

Week 04: Cyber Crime and Preventive Laws and Appraisal

Week 04: Copyright Issue in Digital Medium

**Week 05:** Patent Issues in Digital Medium

Week 05: Cyber Crime & The Adequacy of the Existing Laws

Week 05: Security Laws

Week 05: Security Assurance

Week 05: Intellectual Property Rights

**Week 06:** Intellectual Property Rights and Information Technologies

Week 06: International Standards

Week 06: International Law and jurisdiction in Cyber Space

Week 06: Cyber Criminology

Week 06: Cyber Terrorism

**Week 07:** Information Technology (Amendments) Act, 2008

Week 07: Grey Area of Information Technology Act, 2000

**ABOUT INSTRUCTOR**

- Research Contribution -development of technologies related to computerization of Punjabi language.
- Hindi to Punjabi Machine Translation System using Statistical Approach, Hindi to Punjabi Transliteration System, Plagiarism Detection Software for Hindi texts,
- Development of Sentiment analyser for Punjabi, Urdu to Punjabi Machine Translation System using a hybrid approach.
- Technological development of Hindi, Assamese, Dogri, Kashmiri and Gujarati Language, technology development for specially abled People.
- Publication 95





**DR MANINDER SINGH**  
 Professor & Head, Department of Computer Science and Engineering,  
 Thapar Institute of Engineering and Technology (Deemed to be University),  
 Patiala

**TYPE OF COURSE :** UG  
**INTENDED AUDIENCE :** UG/PG/Diploma  
**PRE-REQUISITES :** The students should have enough knowledge of English as the teaching pedagogy in the video lectures is in English and comprehend the study material; enough knowledge in English and computer networking to do the assignments; access to the internet; interest in Cyber Security / Information Security.

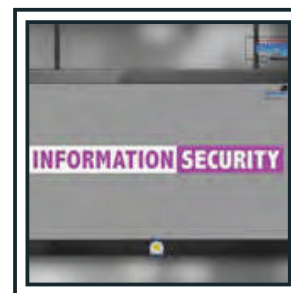
**COURSE DURATION :** 8 weeks (10/09/2018 & 5/11/2018)  
**EXAM DATE :** 2/12/2018(tentative)  
**NO OF CREDITS :** 2

### OBJECTIVE OF COURSE

This course will introduce the basic concepts in Information security in general and system and help know the ways by which our critical information can be sniffed and ways to implement preventive measures. After completing this course, the student will be in position to understand the basics of information security.

The course intends to:

1. Provide an understanding of principal concepts of physical and information security, major issues, technologies and basic approaches in information security.
2. Develop an understanding of information assurance as practiced in computer operating systems, distributed systems, networks and representative applications.
3. Gain familiarity with prevalent network and distributed system attacks, defenses against them
4. Develop a basic understanding of cryptography,
5. Develop an understanding of security policies (such as authentication, integrity and confidentiality), as well as protocols to implement such policies in the form of message exchanges.



### LEARNING OUTCOME

After studying this course, the student would be able to:

- define what information is
- appreciate the value of information to the modern organisation
- understand the CIA triad of Confidentiality, Integrity and Availability
- appreciate the difficulties that arise when valuable information needs to be shared
- identify the five leading-edge resources that have up-to-date information on information security

### COURSE PLAN

<b>Week 01:</b> Information Security	<b>Week 04:</b> Animated Cursor Vulnerability - Proof of Concept - I	<b>Week 07:</b> Wi-Fi Technology
Week 01: Network Security	Week 04: Animated Cursor Vulnerability - Proof of Concept - II	Week 07: Wi-Fi Security Protocol
Week 01: Computer Network Reference Models	Week 04: Electronic Mail	Week 07: Bluetooth Networks and Security Protocols
Week 01: TCP/IP Reference Model	Week 04: Email Security Protocols	Week 07: Virtual Private Networks
Week 01: Protocol Stack	Week 04: WWW Security	Week 07: Virtual Private Networks
<b>Week 02:</b> Transmission Control Protocol	<b>Week 05:</b> Mobile Code Security	Week 07: WiMAX Technology and its Security
Week 02: Data Link Layer	Week 05: Transmission Media	<b>Week 08:</b> Introduction to Mobile IP and Addressing
Week 02: Medium Access Control Protocols	Week 05: Ethernet and Fast Ethernet	Week 08: Cloud Computing Architecture
Week 02: TCP/IP Model-IP Addressing – I	Week 05: Ethernet Security	Week 08: Cloud Computing Security
Week 02: TCP/IP Model-IP Addressing – II	Week 05: Gigabit Ethernet	Week 08: GSM Architecture
<b>Week 03:</b> TCP - Connection Management and Flow Control	<b>Week 06:</b> 10 Gigabit Ethernet	Week 08: MANET - I
Week 03: IPV4 & IPV6	Week 06: ISDN	<b>Week 09:</b> MANET – Routing Protocols
Week 03: UDP - User Datagram Protocol	Week 06: Stream Control Transmission Protocol	Week 09: 3G Network and Security
Week 03: IPSec Security Protocol	Week 06: ATM Network Security Protocol	Week 09: 4G LTE
Week 03: Network Topologies	Week 06: Wireless Networks	Week 09: 5G
		Week 09: VoIP Protocols
		<b>Week 10:</b> Introduction to DDoS
		Week 10: Defence to DDoS Attacks

### ABOUT INSTRUCTOR

- Educational profile – Bachelor's Degree -Pune University
- Master's Degree, with honours in Software Engineering from Thapar Institute of Engineering & Technology,
- Doctoral Degree specialization in Network Security from Thapar University.
- Expertise- Practical know-how of computer networks and security.
- Certified as Ethical Hacker (CIEH), Security Analyst (ECSA) and Licensed Penetration Tester (LPT). On the Roll-of-honour @ EC-Council USA, being
- Guided 7 Ph.D. and 47 Master's thesis in the area of Network Security and secure coding.
- Linux for You (LFY) magazine from India declared him a 'Tux Hero'.
- Senior Member of IEEE, Senior Member of ACM and Life Member of Computer Society of India. He has been volunteering his services for Network Security community as a reviewer and project judge for IEEE design contests.





## DR. ANEESH KUMAR. K

Associate Professor, Dept. Of Statistics, Mahatma Gandhi College,  
Iritty-Kannur; KERALA

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 16 weeks (1 July to 1 November 2018)

**EXAM DATE** : 15/11/2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Higher secondary Mathematics

### OBJECTIVE OF COURSE

To develop a strong foundation for the theory of probability and random variables

### LEARNING OUTCOME

1. Familiarize with the various approaches to probability
2. Learn the concept of random variable
3. Understanding mathematical expectation, moments, mgf etc
4. Study to deal with two dimensional random variables
5. Understanding conditional distributions, conditional mean etc
6. Study various discrete probability distributions
7. Study various continuous probability distributions
8. Learn to solve problems using the probability distributions studied.

### COURSE PLAN

#### Week 1

First day: module 1 - video :Introduction

Third day: module 2 – video: PROBABILITY-Frequency and Axiomatic Approach

Fifth day: module 3 – video:

#### Week 2

First day: module 4 - video : Probability – MORE PROBLEMS

Third day: module 5 – video: Mutual Independence and Bayes' Theorem

Fifth day: module 6 – video: MORE PROBLEMS on Bayes' Theorem

#### Week 3

First day: module 7 – video: Random variables - Discrete type

Third day: module 8 – video: MORE PROBLEMS on Random variables - Discrete type

Fifth day: module 9 - video: Random variables - Continuous type

#### Week 4

First day: module 10 - video : MORE PROBLEMS on Random variables - Continuous type

Third day: module 11 – video: Mathematical Expectation

Fifth day: module 12 – video: MORE PROBLEMS on Mathematical Expectation

sixth day: Interaction based on the three modules covered.

VII th day: deadline for submitting assignments.

#### Week 5

First day: module 13 - video: Moments and Moment Generating Function

Third day: module 14 – video: Characteristic Function

Fifth day: module 15 – video: Discrete Random variables – I

#### Week 6

First day: module 16 - video : Discrete Random variables –II

Third day: module 17 – video: Discrete Random variables –III

#### Week 7

First day: module 18 - video: Discrete Random variables –IV

Third day: module 19 – video: MORE PROBLEMS on Bernoulli, Binomial, Discrete Uniform and Negative Binomial distributions

#### Week 8

First day: module 20 – video: MORE PROBLEMS on Geometric and Poisson random variable

Third day: module 21 – video: Continuous Random variables – I

#### Week 8

First day: module 20 – video: MORE PROBLEMS on Geometric and Poisson random variable

Third day: module 21 – video: Continuous Random variables – I

#### Week 9

First day: module 22 – video: Continuous Random variables –II

Third day: module 23 – video: Continuous Random variables –III

#### Week 10

First day: module 24 – video: Continuous Random variables –IV

Third day: module 25 – video: MORE PROBLEMS on Uniform, Exponential and Gamma Distributions

#### Week 11

First day: module 26 – video: MORE PROBLEMS on Normal and Standard Normal Distribution

Third day: module 27 – video: Bivariate (Two-dimensional) random variables – I

#### Week 12

First day: module 28 – video: Bivariate (Two-dimensional) random variables –II

Third day: module 29 – video: MORE PROBLEMS on Bivariate random variables

#### Week 13

First day: module 30 – video: Bivariate Normal Distribution

Third day: module 31 – video: Correlation and Regression

#### Week 14

First day: module 32 - video : MORE PROBLEMS on correlation and regression

Third day: module 33- video: Law of Large Numbers and Central Limit Theorem

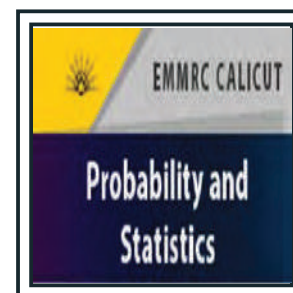
#### Week 15

First day: module 34 – video: MORE PROBLEMS on Law of Large Numbers and Central Limit Theorem

Third day: module 35 – video: Markov Chains, Chapman-Kolmogorov equations, classification of states

#### Week 16

Third day: Term end assessment



### ABOUT INSTRUCTOR

- Associate Professor in Statistics
- Ph.D. from University of Calicut in 2007.
- Published papers in reputed journals,
- Prepared study materials for many universities.



**DR BIJUMON RAMALAYATHIL**

Asst. Professor, PG Department of Mathematics,  
Mahatma Gandhi College, Iritty, Keezhur PO,  
Kannur Dt, Kerala

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 13 weeks (1/7/2018 & 27/09/2018)

**EXAM DATE** : 10-10-2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Knowledge in Mathematics (Higher Secondary Level)

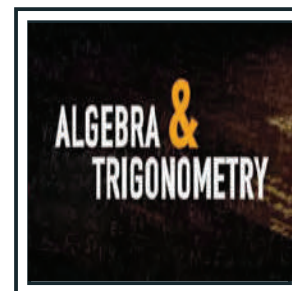
**OBJECTIVE OF COURSE**

To develop strong foundations on concepts coming under UG level Algebra and Trigonometry.

**LEARNING OUTCOME**

Upon successful completion of this course, the students are expected to:

1. Familiarize with the concept of relations and functions.
2. Learn the definition and basic properties of groups.
3. Learn the definition and examples of rings and fields.
4. Study the methods to find the rank of a matrix.
5. Study method of finding solution of homogeneous and nonhomogeneous system of linear equations
6. Study polynomial equations.
7. Study methods to solve polynomials of degree up to 4.
8. Study De-Moivre's Theorem
9. Familiarize with Direct and Inverse Circular and Hyperbolic Functions.
10. Study Summation of Series.

**COURSE PLAN**

36 modules come under the following topics:

- |   |   |
|---|---|
| 1 Relations   | 19 Theory of Equations 3  |
| 2 Equivalence Relations                                       | 20 Theory of Equations 4  |
| 3 Functions   | 21 Theory of Equations 5  |
| 4 Congruent Modulo n  | 22 Groups   |
| 5 Matrices  | 23 Isomorphic Binary Structures                                       |
| 6 Adjoint and Inverse of Matrices                             | 24 Properties of Groups and Subgroups                                 |
| 7 Rank of a matrix and Elementary Transformations             | 25 Cyclic subgroups and Cyclic Groups                                 |
| 8 Determination of Rank using transformations                 | 26 Permutations   |
| 9 Elementary Matrices   | 27 Orbits and Cycles  |
| 10 Fundamental Results Rank and Inverse using transform       | 28 Cosets and Theorem of Lagrange                                     |
| 11 Solution of Homogeneous System of Equations                | 29 Homomorphisms  |
| 12 Method to find solution of Homogeneous System of Equations | 30 Rings and fields   |
| 13 Non Homogeneous System of Equations                        | 31 Integral Domains and Characteristic of a ring                      |
| 14 Characteristic Roots and Vectors                           | 32 De Moivre's Theorem  |
| 15 Characteristic Space                                       | 33 Direct and Inverse Circular Hyperbolic Functions                   |
| 16 Cayley Hamilton Theorem                                    | 34 Logarithm of Complex Quantity Expansion of Trigonometric Functions |
| 17 Theory of Equations 1                                      | 35 Summation of Series  |
| 18 Theory of Equations 2                                      | 36 Summation of Finite and Infinite Series                            |

**ABOUT INSTRUCTOR**

- 18 years of teaching experience in UG and PG Level.
- PhD from University of Calicut in 2010.
- Area of interest- Functional Analysis.



**DR. MINIRANI S**

Assistant Professor in Mathematics, MPSTME, SVKM's  
NMIMS Deemed to be University

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (15/07/2018 & 06/10/2018)

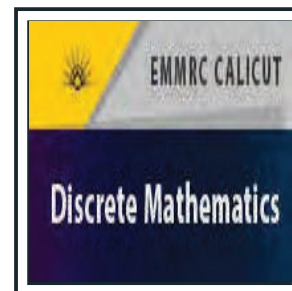
**EXAM DATE** : 30/10/2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Higher Secondary School Mathematics

**OBJECTIVE OF COURSE**

This is an introductory course in discrete mathematics. This course is designed to provide the mathematical foundations for upper level computer science and mathematics courses. Students should learn the essentials of discrete mathematical structures and also how to think and reason mathematically. To accomplish these objectives, the course emphasizes mathematical reasoning and problem solving techniques. The course will help the students to communicate ideas mathematically and solve problems using the mathematical tools learned.

**LEARNING OUTCOME**

Upon successful completion of this course, students will be able to:

1. Construct mathematical arguments using logical connectives and quantifiers.
2. Verify the correctness of an argument using propositional and predicate logic and truth tables.
3. Demonstrate the ability to solve problems using counting techniques and combinatorics in the context of discrete probability.
4. Solve problems involving recurrence relations and generating functions.
5. Use graphs and trees as tools to visualize and simplify situations.
6. Perform operations on discrete structures such as sets, functions, relations, and sequences.
7. Construct proofs using mathematical induction.
8. Discriminate, identify and prove the properties of groups and subgroups.
9. Recognize the use of Karnaugh map to construct and minimize the canonical sum of products of Boolean expressions and transform it into an equivalent Boolean expression.

**COURSE PLAN**

**Week 01:-** Introduction, Sets and Propositions, Computability and Formal Languages

**Week 02 :-** Permutations, Combinations and Discrete Probability

**Week 03:-** Relations and Functions

**Week 04:-** Graphs and planar graphs

**Week 05:-** Trees

**Week 06-07:-** Finite State Machines, Analysis of algorithms

**Week 08:-** Recurrence relations

**Week 09-10:-** Groups

**Week 11-12:-** Boolean Algebra

**ABOUT INSTRUCTOR**

Dr. Minirani S is currently working as an Assistant Professor in the Department of Basic sciences and Humanities at Mukesh Patel school of Technology Management and Engineering, SVKM's NMIMS Deemed to be University, Mumbai. She has completed her Undergraduate and Master's degree programs in Mathematics from the University of Calicut and her Doctoral Program from National Institute of Technology Calicut in the area of Fractal Geometry.





## DR. JOS T. PUTHUR

Associate Professor, Department of Botany, University of Calicut  
Calicut University, Malappuram, Kerala

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 13 weeks (July 16 & Oct 22, 2018)

**EXAM DATE** : Nov 12, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Background of the basic science at +2 level

### OBJECTIVE OF COURSE

- To develop a strong foundation for the fundamental principles of classical and advanced genetics
- To understand how hereditary information in DNA controls what an organism looks like and how it works
- To impart knowledge of how organisms, populations and species evolve
- To equip the students to undertake advanced courses in the areas of medical genetics, developmental and behavioural genetics, bioinformatics, environmental genetics, genomics etc.

### LEARNING OUTCOME

1. Explain the fundamentals of genetics
2. Explain about the control of DNA in functioning of organism
3. Explain about the evolution of populations and species
4. Explain about the medical issues related to chromosomal variations.

### COURSE PLAN

**Week 01:-** History of Genetics, Scope and significance of genetics, Mendel's Experiments, Symbols and terminology, Principle of dominance and segregation, Principle of independent assortment, Mendelian inheritance and probability

**Week 2:-** Allelic variation and gene function- Incomplete dominance, co-dominance, multiple alleles, Gene action-from genotype to phenotype., Gene interaction, penetrance, expressivity, Epistasis, pleiotropy, interaction with environment.

**Week 3:-** Continuous variation, Quantitative traits - additive alleles, calculating the number of polygenes, significance of polygenic control. Heritability in broad sense and narrow sense ; Artificial selection.

**Week 4:-** Chromosomes – chromosome number, sex chromosome, Chromosome theory of inheritance - Experimental evidence, non-disjunction as proof of, chromosome theory, chromosomal basis of Mendel's principles of segregation and

independent assortment. Sex linked genes in humans - Haemophilia, colour blindness, fragile X. Dosage compensation of X- linked genes. Hyper activation of X-linked gene in male drosophila, Inactivation of X-linked gene in female. Sex chromosome and sex determination - Human, Drosophila, other animals.

**Week 5:-** Morphology of chromosomes, Structural and Numerical Variations Linkage, Recombination, Crossing over (Mitotic crossing over), Chromosome mapping (two point and three point test cross), Tetrad analysis.

**Week 6:-** Maternal Inheritance, Mitochondrial- Snail, poky and petite, Chloroplast – leaf variegation in *Mirabilis jalapa*, Lojap.

**Week 7:-** Population and gene pool - Allelic frequency, Hardy – Weinberg law - Changes in genetic structure of population Mutation, genetic drift (causes and effect), migration, natural selection. Non-random mating (heterosis)

**Week 8:-** Introduction – Nature of Genetic material- Discovery of DNA as genetic material (Griffith, Avery, Hershey Chase)

Structure of nucleic acid (A, B and Z model), Super coiling and Topoisomerase, Types of RNA- Structural and functional.

**Week 9:-** Salient features of prokaryotic and eukaryotic DNA replication. Homologous recombination, Site specific recombination. Models of recombination (Holiday model, Double strand break, etc.)

**Week 10:-** Types of mutation, Causes of mutation - Physical and chemical mutagens, Spontaneous and Induced mutations, Molecular basis of mutations

**Week 11:-** Excision Mechanism – Nucleotide, Base Post Replication Repair- mismatch repair, recombination repair, SOS repair. Central Dogma, Transcription in prokaryotes, eg: Lac, Tryp operon.

**Week 12:-** Transcription in eukaryotes, RNA processing – nuclear splicing, rRNA and tRNA processing

**Week 13:-** Salient features of genetic code, Translation in prokaryotes, Translation in eukaryotes, Post-translational modification

### ABOUT INSTRUCTOR

2012 - Selected as visiting scientist under INSA-DFG programme of International Scientific Collaboration and Exchange of Scientists for 3 months visit to Institut für Molekulare Physiologie und Biotechnologie der Pflanzen (IMBIO), University of Bonn, Germany.

2008 - Awarded TWAS Research Grant under the category; award for high-level and promising scientific research projects carried out by individual scientists in developing countries.

2007 - Awarded BOYSCAST Fellowship of DST, Govt. of India

2006 - Awarded UGC Fellowship under Indo-Hungarian Educational Exchange programme.

2005 - Awarded TWAS-UNESCO Associateship at centers of Excellence in South (CEFOBI, Rosario, Argentina).

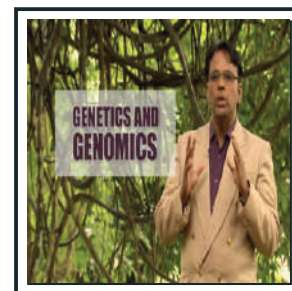
2003 - Awarded Fast Track Young Scientist Project (a grant of Indian Rs. 12 lakhs), by Dept. of Science and Technology, Govt. of India.

1. Programm Director for an electronic program on the topic "photosynthesis", telecasted by state owned broadcasting corporation (Doodarshan), organized by State Institute of Education and Technology (SIET), a Kerala govt. agency – 2004.

2. LECTURED on the topic "Abiotic stresses and tolerance mechanisms in plants" for the live lecture series produced by EMMRC, University of Calicut and telecast through the EDUSAT Network/www.webcast.gov.in on 29-05-2014.

### RESEARCH PUBLICATIONS

International – 28







## MRS. BAGESHREE DEO

Faculty, Brihan Maharashtra College of Commerce (BMCC), Pune

<b>TYPE OF COURSE</b> : Certificate	<b>COURSE DURATION</b> : 8 weeks (01/10/2018 & 24/11/2018)
<b>INTENDED AUDIENCE</b> : UG/Certificate	<b>EXAM DATE</b> : 30 November 2018 -tentative
	<b>NO OF CREDITS</b> : 3
<b>PRE-REQUISITES</b> : Any bonafide student of approved college / institution / university in India (Ideally after Class XII) Any citizen of India keen to learn about various aspects of Information Technology.	

### OBJECTIVE OF COURSE

1. Learners about concept of Information Technology.
2. Learners about MS - Office.
3. Learners about the concept of Networking and Internet
4. Learners about concept of System.
5. Learners about use of various new technologies in Information Technology.

### LEARNING OUTCOME

- Course in Information Technology will help students to understand the working of a Computer in an easy way as Information Technology is inevitable today. Every person should be Computer literate.
  - The syllabus starts from basics and advances to the current technology.
  - This course will provide knowledge of MS-Office which is required in our day to day life.
  - Learners will know the concept of Operating System behind the Mobile phone, I-Pad that are commonly used by everyone.
- The syllabus includes Internet and its utilities as Online transaction is the need of the hour. Hence, after this course students shall learn about Internet and using its various applications.



### COURSE PLAN

- Week 01**:- Basics of IT
- Week 02** :- MS - Office
- Week 03** :- MS - Office
- Week 04** :- Networking
- Week 05** :- Internet
- Week 06** :- Database Management System
- Week 07** :- System Basics
- Week 08** :- Cloud Computing

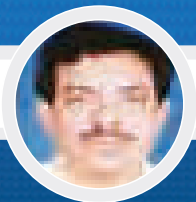
### ABOUT INSTRUCTOR

Qualification: MCM, MCA

Career details:

- Worked as MCM faculty and Placement Officer at Marathwada Mitra Mandal's IMERT- B school, Pune.
- Worked as a faculty at Indsearch, Pune.
- Paper Presentations in various forums:
- "Technology Management for Business Enhancement" at the International Research Conference at Kohinoor Business School and Center for Management Research, Khandala.
- "Cyber Security" at the National Level Seminar at the Arihant College of Arts, Commerce and Science, Pune.
- "Data Mining and Data Warehousing" at the National Level Conference on Advancements in IT and Management at MIT, Alandi Pune.



**DR. MD. NIAMAT ALI**

Associate Professor, Centre of Research for Development, University of Kashmir,  
Srinagar-190006, J&K, India

**TYPE OF COURSE :** UG

**INTENDED AUDIENCE :** UG

**PRE-REQUISITES :** 10+2

**COURSE DURATION :** 13 weeks (16/07/2018 & 13/10/2018)

**EXAM DATE :** 25/10/2018

**NO OF CREDITS :** 4

**OBJECTIVE OF COURSE**

The objectives of this course are to give the target students/audience an understanding of:  
An overview of cells, Tools and techniques in cell biology, Cell wall, extra cellular matrix and cell interactions, Cell membrane, Nucleus, Mitochondria, chloroplasts, lysosomes, gloxysomes and peroxisomes, Cytoskeleton, Protein sorting and transport, Cell signalling, Cancer

**LEARNING OUTCOME**

- The course "Cytogenetics" is a core course in UGC, B. Sc. (Honours) Biological Sciences, Choice Based Credit System (CBSE).
- The course is specially designed to supplement and enhance the understanding of students about different dimensions of Cytogenetics

**COURSE PLAN****Week 01**

Historical perspective of cells, cell theory and exceptions to cell theory

A detail classification of cell types within an organism; cell, tissue, organ and organisms as different levels of organization.

Overview of prokaryotic and eukaryotic (plants and animals) cells

Structure of viruses - general structure, properties of viral envelopes and enzymes (principles of virus taxonomy)

Overview of phages, virioids, mycoplasma and Escherichia coli

Structure and functions of the immune cells & organs - hematopoiesis, T and B lymphocyte, NK cells, monocyte and macrophages

Structure, properties and functions of the immune cells & organs - neutrophils, eosinophils, basophils, mast cells and dendritic cells

Structure, properties and functions of the immune cells & organs - thymus and bone marrow; lymph nodes, spleen, MALT, GALT and SALT

**Week 2**

Mitosis and meiosis: interrelation between the cell structure and the genetic function, mitosis, meiosis.

Linkage, crossing over and chromosomal mapping

Cytological basis and molecular mechanism of crossing over (recombination frequency as a measure of linkage intensity, two factor and three factor crosses, interference and coincidence, somatic cell genetics – an alternative approach to gene mapping)

Chromosomal mechanisms and environmental factors determining sex (Barr bodies, dosage compensation)

Gametogenesis and fertilization: structure and production of gametes, zygote formation

Functional organization of the cell nucleus: chromatin movements, nuclear bodies and its significance.

**Week 3**

Microscopy and its types: principles of light microscopy, phase contrast, confocal microscopy. Electron microscopy (EM) - scanning EM and scanning transmission EM (STEM), fluorescence microscopy

Cytochemical techniques: spectrophotometry: mass spectrometry, X-ray diffraction analysis. Flow cytometry: fluochromes, fluorescent probe and working principle

Sub-cellular fractionation (differential and density gradient centrifugation)

Cell fixation and staining: freeze-drying and free-substitution, microtomes and embedding, chemical basis of staining, metachromasia

Human karyotype: banding pattern and nomenclature (G and Q banding), common syndromes due to numerical chromosome changes, common syndromes due to structural alterations (translocations, duplications, deletions, microdeletion and fragile sites).

Human cytogenetics technique: Fluorescence In Situ Hybridization (FISH)

Chromatography: paper, TLC, gel-filtration

**Week 4**

General characteristics of cell differentiation

Molecular mechanism of cell differentiation

**Week 5**

Chemical composition and properties of membrane components, fluid mosaic model of membrane structure, membrane fluidity and its experimental demonstration, membrane asymmetry,

Selective permeability of the membranes, membrane transport, liposomes, freeze-etching and freeze fracture technique for membrane study.

Cell wall, extracellular matrix and cell interactions; Bacterial and eukaryotic cell wall; the extracellular matrix and cell matrix interactions; cell-cell interactions.

Plasma membrane and membrane permeability: Active transport, passive transport and proton pumps associated (Na-K, Ca calmodulin etc. and their distribution)

Phagocytosis, pinocytosis, exocytosis.

**Week 6**

Nuclear structure and functions

Nuclear lamina, transport across nuclear envelope, Chromatin: molecular organization

Nucleolus and rRNA processing.

Genome sequence and chromosome diversity, chromosome duplication and segregation, the nucleosome.

Chromatin structure: euchromatin, heterochromatin-constitutive and facultative heterochromatin

Regulation of chromatin structure and nucleosome assembly, organisation of chromosomes

Human chromosomal abnormalities: aneuploidy, reciprocal translocations, sex chromosomal abnormalities and autosomal abnormalities (mongolism)

**Week 7**

Structural organization, function and marker enzymes of mitochondria, mitochondrial biogenesis, protein import in mitochondria. Semiautonomous nature of mitochondria and chloroplast, chloroplast DNA, peroxisomes assembly.

Structure and functions of endoplasmic reticulum, Golgi apparatus, Mechanism of vesicular transport and lysosomes

Mitochondria and chloroplast DNA (endosymbiotic hypothesis for the origin of mitochondria and chloroplasts)

Extra-chromosomal inheritance: chloroplast mutation/ variegation in four o' clock plant and Chlymodonas.

Mitochondrial mutations, maternal effects and ineffective heredity

**Week 8**

Cytoskeleton and cell movement

(Structure and organisation of actin filaments, actin, myosin and cell movement)

Structure and organization of intermediate filaments, microtubules and their role

**Week 9**

Signaling molecules and their receptor; functions of cell surface receptors; Intracellular signal transduction pathway; signaling networks.

Cell cycle: Eukaryotic cell cycle, regulation of cell cycle progression, events of mitotic phase, meiosis and fertilization

**Week 10**

Characteristics of cancer cells, carcinogenesis: cancer initiation, promotion and progression, termination.

**ABOUT INSTRUCTOR**

- ACADEMIC HIGHLIGHTS AT A GLANCE
- Education- M.Sc from University of Burdwan, West Bengal, India; M.Phil and Ph.D from Aligarh Muslim University, Aligarh-202002, U. P., India.
- Teaching Experience: 21 years (A. M. U, Aligarh- 06 years and Kashmir University, Srinagar - 15 years)
- Research Experience: 26 years
- Major Field of Research and Teaching Interest: Cytogenetics, Molecular Biology and Immunogenetics; Toxicogenomics; Human Genomics and Proteomics; Stem Cell Biology and Regenerative Medicine; Radiation Biology and Gene Therapy; Cell and Tissue Culture Technology and Ageing Biology; PCR and DNA Fingerprinting Technology, FISH Technology and Comet Assay; Biostatistics.



**DR. HAREL THOMAS**

Professor, Department of Applied Geology  
Doctor Harisingh Gour Vishwavidyalaya, Sagar (M.P.)

**TYPE OF COURSE** : Science Undergraduate (UG)

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 17 weeks (6<sup>th</sup> Aug 2018 & 10<sup>th</sup> Dec.2018)

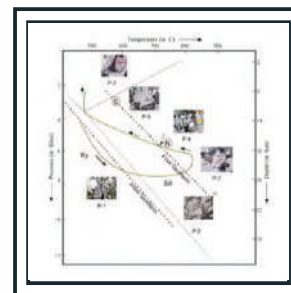
**EXAM DATE** : 13/14 December, 2018 - tentative

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduate Geology Students or any other students within and outside India are interested in course can enroll.

**OBJECTIVE OF COURSE**

This course is a basic to advance introduction for the undergraduate students pursuing Honours degree in Geology/ B.Sc. Geology/ Engineering Graduate for Civil and Mining. The term petrology comes from the ancient Greek word Petra "rock" and Logos "explanation" that means the study of rocks and their processes of origin. Such study includes description and classification of rocks as well as interpretation of their origin. Petrology is subdivided into three major rock types: sedimentary, igneous and metamorphic. Igneous and metamorphic petrology are combined, due to the similarity of approach and principle involved during their formation. So I highly intended this course is either a combined igneous and metamorphic or two separate ones, for the interest of students, So in this course, I will cover Metamorphic petrology. This course deals with the naturally occurring rocks in field as well as laboratory analysis data that provide sufficient information how they occur in the nature. It gives idea of modern petrological theories which are widely accepted for their origin. The course definitely provides better understanding to students for the processes and principles involved during the origin and evolution of the metamorphic rocks.

**LEARNING OUTCOME**

The Course aims to make to the students well-versed with the strength of Metmorphic Petrology theory applications in the field of Geology. The course definitely provides better understanding to students for the processes and principles involved during the origin and evolution of the metamorphic rocks. I hope it will be useful for the geology students within and outside India.

**COURSE PLAN**

**Week 01:** Geology & its Perspective, Carrier in Geology, Rock Cycle and Structure and classification of the silicate minerals. Daily quiz, assignments along with weekly test

**Week 02:** Definition of metamorphism and Factors controlling metamorphism Along with daily quiz and assignments along with weekly test.

**Week 03:** Variables / agents and types / kinds of metamorphism – contact, regional, fault zone metamorphism, impact metamorphism; Along with daily quiz and assignments along with weekly test.

**Week 04:** Types of metamorphism and classification based on metamorphic agent and Metamorphic facies and metamorphic grade Along with daily quiz and assignments along with weekly test.

**Week 05:** Index minerals, chemographic projection, graphical representation of metamorphic minerals assemblages; ACF, AKF and AFM etc, Other diagram. Along with daily quiz and assignments along with weekly test.

**Week 06:** Metamorphic zones, isogrades and reaction isograd and Concept of classification of metamorphic facies, facies-series and grade. Along with daily quiz and assignments along with weekly test.

**Week 07:** Structure and texture of metamorphic rocks; Description of facies; Along with daily quiz and assignments along with weekly test.

**Week 08:** Facies of low pressure: Albite epidote facies Hornblende hornfels facies and Pyroxene hornfels facies Along with daily quiz and assignments along with weekly test.

**Week 09:** Pyroxene hornfels facies; Sanidinite Facies Description of facies; facies of medium to high pressure. Zeolite facies Along with daily quiz and assignments along with weekly test.

**Week 10:** Green Schist Facies and amphibolite facies. Along with daily quiz and assignments along with weekly test.

**Week 11:** Ganulite Facies and Description of facies; facies of very high pressure. Blue schist & Eclogite facies. Along with daily quiz and assignments along with weekly test.

**Week 12:** Regional metamorphism of pelitic rocks – 1. Along with daily quiz and assignments along with weekly test.

**Week13:** Regional metamorphism of pelitic rocks – 2 and Basic and Ultrabasic rocks. Along with daily quiz and assignments along with weekly test.

**Week 14:** Thermal metamorphism of pelitic rocks; Thermal metamorphism of calcareous rocks and Different types of Metamorphic reactions. Along with daily quiz and assignments along with weekly test.

**Week 15:** Petrographic details of some important metamorphic rocks such as - slate, phyllite, schists, gneiss, quartzite, marble, charnockite, Leptynite etc; Along with daily quiz and assignments along with weekly test.

**Week 16:** Migmatites and Metasomatism & Differentiation. Along with daily quiz and assignments along with weekly test.

**Week 17:** Final submission of assignment.

**Week 18:** End Term (Final Exam) and Credits transfer and Result.

**ABOUT INSTRUCTOR**

- Professor in the Department of Applied Geology, Doctor Harisingh Gour Vishwavidyalaya, Sagar. And also served as a Reader in the Department of Geology, Mizoram Central University, Aizawl in year 2004.
- Supervised many students for Doctorate Degrees.
- Delivered Massive Open Online Course (MOOC) on Petrology for undergraduate students of Geology. The course has successfully completed two cycles with rating of 4.9 out of 5. During first cycle (7th Nov. 2016 to 5th March 2017) more than 706 students were enrolled and in 2nd cycle (24th July to 25th



**DR. JAMKHOGINLUNGDIM**

Assistant Professor (Sr. Scale), College of Agriculture,  
Central Agricultural University, Imphal

<b>TYPE OF COURSE</b>	: Certificate Course	<b>COURSE DURATION</b>	: 12 weeks (24/09/2018 to 28/12/2018)
<b>INTENDED AUDIENCE</b>	: UG/PG/Diploma/Certificate/ School	<b>EXAM DATE</b>	: 12/03/2019
<b>PRE-REQUISITES</b>	: Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course		

**OBJECTIVE OF COURSE**

The course envisages a broad objective of imparting knowledge on how the crops have been cultivated by man from time immemorial. It is also aimed at guiding students to acquire knowledge on the cultivation practices of kharif and rabi crops, their managements including land preparation, seed treatments, right choice of manures and fertilizers and their application methods and rates, weed, insect, diseases and other pest managements, harvesting and threshing techniques, grain storages etc.

**LEARNING OUTCOME**

After studying this course, students will be able to understand the basic knowledge of Agronomy. They will also learn the basic knowledge on the cultivation practices of kharif and rabi crops, their managements including land preparation, seed treatments, right choice of manures and fertilizers and their application methods and rates, weed, insect, diseases and other pest managements, harvesting and threshing techniques, grain storages etc. Besides these scientific operations, students will have thorough knowledge of water and nutrient managements for a bumper harvest. The knowledge can be applied to achieve maximum crop production.

**COURSE PLAN****Week 01:**

1. Rice, 2. Maize, 3. Shorgum, 4. Pearl millet

**Week 02:**

1. Minor millet, 2. Pigeon pea, 3. Mungbean, 4. Urdbean

**Week 03.:**

1. Groundnut, 2. Sesame, 3. Soybean, 4. Cotton

**Week 04:**

1. Jute, 2. Sunhemp, 3. Cowpea, 4. Napier Grass

**Week 05:**

1. Origin, geographic distribution, economic importance, soil and climatic requirement, Varieties of Wheat, 2. Cultural Practices of Wheat, 3. Barley, 4. Chickpea

**Week 06:**

1. Lentil, 2. Pea, 3. French bean, 4. Rapeseed & Mustard

**Week 07:**

1. Sunflower, 2. Safflower, 3. Linseed, 4. Sugarcane

**Week 08:**

1. Sugarbeet, 2. Mentha, 3. Lemon Grass, 4. Citronella

**Week 09:**

1. Palma Rosa, 2. Isabgol, 3. Posta, 4. Potato

**Week 10:**

1. Tobacco, 2. Berseem, 3. Lucern, 4. Oat,

**Week 11:**

1. Rice nursery preparation and transplanting
2. Determination of effect of seed size and sowing depth on germination or seedling vigour and sowing method of Kharif crops
3. Calculations on seed rate and yield estimation of Kharif crops
4. Fertilizer calculations and Top dressing of nitrogen in Rice and Maize
5. Study of yield contributing characters, physiological maturity and identification of weeds in different Kharif crops

**Week 12:**

1. Seed bed preparation and sowing of wheat, sugarcane and sunflower
2. Top dressing of nitrogen in wheat and mustard
3. Identification of weeds and application of herbicide in wheat and grain legumes
4. Calculations on seed rate of rabi crops
5. Morphological characteristics and Yield contributing characters of wheat, sugarcane, chickpea and mustard

**ABOUT INSTRUCTOR**

Dr. Jamkhogin Lungdim is an Assistant Professor (Sr. Scale), Department of Agronomy, College of Agriculture, Central Agricultural University, Imphal (Manipur). He finished his PhD. From BHU Varanasi. He has been associated with department of Agriculture since 2004. Dr. Lungdim published 16 research papers in National & International Journals and 1 Book chapter; 5 course-based Practical/Study Manuals for B.Sc./PG level. He presented 20 research papers (6 International, 10 National & 4 regional/state level) on different Conference, Symposium, Seminar and Workshop. He completed 2 Intramural Research Projects as PI and 3 IRPs as Co-PI; 1 Intramural Research Project going on and one project sanctioned by Dept. of Science & Technology, Govt. of Manipur. He was also the resource person in 15 Technical Training Programmes in different topics/field of agriculture.





## DR. BIRESHWAR SINHA

Assistant Professor, College of Agriculture,  
Central Agricultural University, Imphal

<b>TYPE OF COURSE</b> :	Certificate Course	<b>COURSE DURATION</b> :	12 weeks (24/09/2018 to 21/12/2018)
<b>INTENDED AUDIENCE</b> :	UG/PG/Diploma/Certificate/ School	<b>EXAM DATE</b> :	06/03/2019
<b>PRE-REQUISITES</b> :	Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course		

### OBJECTIVE OF COURSE

To understand about the causes of diseases on horticultural crops, the host-pathogens interaction, favourable condition for disease development.

### LEARNING OUTCOME

After learning this course the students will be able

1. To understand about the causes of diseases on horticultural crops.
2. To understand about the host-pathogens interaction, favourable condition for disease development.
3. To understand the management of the diseases on horticultural crops

### COURSE PLAN

#### Week 01:

- Potato  
1. Diseases cause by fungi, bacteria, viral and nematode  
Chilli  
2. Diseases cause by fungi, bacteria and virus  
Cucurbits  
3. Diseases cause by fungi and Bacteria

#### Week 02:

- Crucifers  
1. Diseases cause by fungi, bacteria and virus  
Bhindi & Brinjal  
2. Diseases cause by fungi, bacteria, virus and nematode and phytoplasma  
Beans  
3. Diseases cause by fungi and virus

#### Week 03:

- Onion  
1. Diseases cause by fungi & bacteria  
Tomato  
2. Diseases cause by fungi  
Guava  
3. Diseases cause by fungi

#### Week 04:

- Banana  
1. Diseases cause by fungi, bacteria  
2. virus and nematodes  
Grapes  
3. Diseases cause by fungi

#### Week 05:

- Pomegranate  
1. Diseases cause by fungi, bacteria  
Mango  
2. Diseases cause by fungi, bacteria and

phanerogamic parasites

- Apple  
3. Diseases cause by fungi

#### Week 06:

- Coconut  
1. Diseases cause by fungi, virus and viroid  
Citrus  
2. Diseases cause by fungi, bacteria and viruses  
Oil palm, Betel vine, Mulberry  
3. Diseases cause by fungi, Bacteria and nematode

#### Week 07:

- Coffee  
19. Diseases cause by fungi & nematode  
Tea  
20. Diseases cause by fungi and algae  
Rose & Chrysanthemum  
21. Diseases cause by fungi

#### Week 08:

- Beans  
1. Rust of Beans Leaf spot of Beans  
2. Citrus  
Citrus canker, Citrus greening, Powdery mildew  
3. Guava & Papaya  
Yellow leaf Spot, Anthracnose Papaya Mosaic,  
Papaya Leaf Curl

#### Week 09:

- Banana  
1. Sigatoka Leaf top, Bunchy top  
2. Pomegranate & Ber  
Leaf Spot, Fruit Rot  
3. Mango  
Anthracnose, Powdery Mild Dew Mango  
Malformation

#### Week 10:

1. Grapes  
Rust Powdery Mild Dew Downey Mild Dew  
2. Chilli  
Leaf Spot, Anthracnose, Wilt, Leaf Curl  
3. Brinjal, Bhindi  
Leaf Spot, Wilt, Damping off of seedlings,  
Root Knot for Brinjal and Yellow vein mosaic

#### Week 11:

1. Potato, Tomato  
Late Blight, Early blight, Leaf Roll Common  
scab Brown Rot, Late blight, Wilt, Leaf Curl  
2. Crucifers and Cucurbits  
White Rust, Downey Mild dew, Leaf spot,  
Mosaic & Powdery Mildew Cucurbit mosaic  
3. Onion

#### Week 12:

- Leaf Spot, Onion Smudge, White rot of Onion  
1. Rose, and Jasmin  
Black Spot, Powdery Mild Dew, Die Back, Rust.

Interactions with students

### ABOUT INSTRUCTOR

- Dr. Bireshwar Sinha is an Assistant Professor in the Department of Plant Pathology, College of Agriculture, Central Agricultural University, Imphal, Manipur.
- PhD. from BCKVV, West Bengal.
- Completed many research projects funded by ICAR, DBT Govt. of India, DBT-RA etc.
- Teaching experience- B Sc(Agri), MSc(Plant Pathology), Trainers Training Programme
- Supervising 3 scholars.
- Publications include - Referred Journal with NAAS ID-14, News Letter/ Non referred journal/ Farm Magazine with ISSN -15, Book Chapter-2 and News Paper article-10.
- Submitted 22 Trichoderma spp and one Fusarium to NCBI gene bank with accession number in collaboration with NCIPM, New Delhi (2014-2015).



**DR. MOHAN**

Former Professor, Agricultural College and Research Institute  
Tamil Nadu Agricultural University, Madurai  
Tamil Nadu

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 6 weeks (16/07/2018 to 24/08/2018)

**EXAM DATE** : 27/11/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed higher secondary(10+2)  
Should possess a basic interest towards Agriculture

**OBJECTIVE OF COURSE**

- To understand the classification of weeds
- To study the life cycle of weeds
- To manage weeds through traditional methods
- Manage weeds through Biological means
- Manage weeds through modern methods and
- To develop Integrated approach to manage weeds

**LEARNING OUTCOME**

On completion, one can possess sufficient knowledge on the proper management of weeds through integrated approach and thereby boost agricultural yield and minimise loss to great extent.

**COURSE PLAN****Week 01**

1. Getting to know about weeds
2. Identifying salient features of weeds
3. Classifying attributes of weeds
4. Interacting with crop weeds
5. Analysing life cycle of weeds

**Week 02**

6. Preventing Controlling and Eradicating Weeds
7. Traditional Methods To Control Weeds
8. Examining Biological Methods To Manage Weeds
9. Analysing Modern Methods to Control Weeds

**Week 03**

10. Introducing Herbicides
11. Methods of herbicide application
12. Mode of Action and Mechanism of Herbicide

**Week 04**

13. Identifying Selectivity of Herbicides
14. Identifying the advanced theories of herbicides
15. Weed Management Methods
16. Understanding herbicide - resistant crops

**Week 05**

17. Absorbing herbicides
18. Translocating Herbicides
19. Shift Of Weed Flora In Cropping Systems.
20. Integrated Weed Management

**ABOUT INSTRUCTOR**

- 36 years of Teaching and research
- Conducted mushroom research projects with a collaboration of National Centre for Mushroom Research and Training ( NCMRT ) Solan. Developed low cost technology in mushroom.
- As a first time in the Indian history he released a Newsletter exclusively for Mushroom in Tamil viz; Kalan seithimadal and served as its first editor for a period of five years.
- Conducted more than one thousand mushroom training and created a base for protein revolution.
- Published more than 500 research articles in reputed foreign and Indian Journals. Written 5 books on mushroom cultivation.
- Guided more than 70 post graduate students





## DR. MOHAN

Former Professor, Agricultural College and Research Institute  
Tamil Nadu Agricultural University, Madurai  
Tamil Nadu

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE**: UG

**COURSE DURATION** : 6 weeks (09/07/2018 to 24/08/2018)

**EXAM DATE** : 28/11/2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed higher secondary(10+2)  
Should possess a basic interest towards Agriculture

### OBJECTIVE OF COURSE

- To know about agri business and its allied sector
- To know major emerging issues in Agri-Business
- To classify types of Agri- Business
- To understand management Strategy
- To identify basic function of Agri- Business and
- To Exploring policy matters in Agri- Business

### LEARNING OUTCOME

On completion, one can possess sufficient knowledge on Agri business, its types, functions, management strategy, emerging issues and policy matters



### COURSE PLAN

#### Week 01

- 01 GETTING TO KNOW AGRICULTURE
- 02 INTRODUCING AGRONOMY
- 03 INTRODUCING SOIL
- 04 ANALYSING CROPS AND CROP PRODUCTION

#### Week 02

- 05 EXPLAINING AGRICULTURAL CONCEPTS
- 06 INTRODUCING AGRIBUSINESS
- 07 IDENTIFYING THE STRUCTURE OF AGRIBUSINESS
- 08 SPECIFYING LEVELS

#### Week 03

- 09 OUTLINING EMERGING ISSUES OF AGRIBUSINESS
- 10 MANAGING AGRIBUSINESS
- 11 GETTING TO KNOW MANAGEMENT
- 12 IDENTIFYING COMPONENTS OF MANAGEMENT FUNCTIONS

#### Week 04

- 13 CLASSIFYING TYPES OF BUSINESS ORGANISATION
- 14 UNDERSTANDING PLANNING IN MANAGEMENT
- 15 DEFINING BASE FOR PLANNING
- 16 ELABORATING MANAGEMENT BY OBJECTIVES

#### Week 05

- 17 UNDERSTANDING ORGANISING IN MANAGEMENT
- 18 STAFFING IN MANAGEMENT
- 19 GETTING ACQUAINTED WITH DIRECTING
- 20 INTRODUCING MOTIVATION AND LEADERSHIP

#### Week 06

- 21 DEFINING COMMUNICATION
- 22 DEFINING CONTROLLING
- 23 IDENTIFYING THE BASIC FUNCTIONS OF BUSINESS
- 24 EXPLORING LEGAL AND POLICY MATTERS IN AGRIBUSINESS

### ABOUT INSTRUCTOR

- 36 years of Teaching and research
- Conducted mushroom research projects with a collaboration of National Centre for Mushroom Research and Training ( NCMRT ) Solan. Developed low cost technology in mushroom.
- As a first time in the Indian history he released a Newsletter exclusively for Mushroom in Tamil viz; Kalan seithimadal and served as its first editor for a period of five years.
- Conducted more than one thousand mushroom training and created a base for protein revolution.
- Published more than 500 research articles in reputed foreign and Indian Journals. Written 5 books on mushroom cultivation.
- Guided more than 70 post graduate students





## DR. ARUP KUMAR MITRA

Assistant Professor,  
St. Xavier's College, Kolkata

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 9 weeks (6<sup>th</sup> Aug, 2018 to 5<sup>th</sup> Oct, 2018)

**EXAM DATE** : Tentatively Dec, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 10+2 with Science background

### OBJECTIVE OF COURSE

- 1. This course will orient the students with the basics of viral and fungal classification.
- 2. On successful completion of the course, the student will be able to understand the different antibiotics used in the market and their mechanism of action.
- 3. This course will enable them to apply the acquired knowledge in the field of practical microbiology
- 4. It will enable them to write a review on allied microbiological field and that may be suitable for publication.

### LEARNING OUTCOME

Successful completion of this module will enable a student to perform practical hands on basic microbiological techniques that can be quite handy whenever he or she joins any research laboratory or even in industry.



### COURSE PLAN

#### Week1

Module 1: Morphology, Disease and Holmes Classification.

Module 2: Classification of viruses-I

Module 3: Classification of viruses II

Module 4: Classification of fungi: Classical Concept -I

#### Week 2

Module 5: Classification of fungi: Classical Concept -II

Module 6: Modern Classification of fungi: Modern Concept –I

Module 7: Classification of fungi: Modern Concept –II

Module 8: Classification of fungi: Modern Concept – III

#### Week 3

Module 9: Classification of yeast-I

Module 10: Classification of yeast-II

Module 11: Application of microbes

Module 12: Antibiotics: The secondary Metabolites

#### Week 4

Module 13: Role of Staphylococcus in infection

Module 14: Nitrogen fixation & Role of Nif and Nod genes.

Module 15: Microbiology & Human Health

Module 16: Bacterial Diseases

#### Week 5

Module 17: The pathogenesis of Vibrio cholerae

Module 18: Introduction to Salmonella

Module 19: Preparation of Culture Media: Liquid Medium

Module 20: Preparation of Culture Media: Solid Medium

#### Week 6

Module 21: Sterilization Techniques

Module 22: Isolation of single colony on solid media

Module 23: Enumeration of bacterial numbers by serial dilution & plating

Module 24: Measurement of fungal biomass

#### Week 7

Module 25: Animal Handling (Practical)

Module 26: Staphylococcus aureus

Module 27: Isolation of protozoa from soil

Module 28: Antibiotic sensitivity assay: natural Product

#### Week 8

Module 29: Preparation of culture media for pathogenic bacteria – part 1

Module 30: Preparation of culture media for pathogenic bacteria – part 2

#### Week 9

Module 31: Albert and Giemsa Staining

Module 32: Determination of Growth Phase of E. coli by Measurement of OD & Cfu

**Module 33:** Preparation of Buffer Solution

### ABOUT INSTRUCTOR

- Post Graduate and Ph.D. from Calcutta University, post-doctoral experience from South Bank University, London.
- Presently working as an Associate Professor, P.G Department of Microbiology, St. Xavier's College, Kolkata.
- More than 22 years of teaching experience.
- Founder Head of the Department of Microbiology.
- Presented 41 papers in different National and International Seminars.
- Written 32 different books on Biology, Environmental Science and Microbiology.
- Published 72 papers in different national and international journals.







**DR. KASTURI SARKAR**  
Assistant Professor  
St. Xavier's College Kolkata

**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG/PG

**COURSE DURATION** : 9 weeks (6<sup>th</sup> Aug, 2018 to 5<sup>th</sup> Oct, 2018)  
**EXAM DATE** : Tentatively Dec, 2018  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : 10+2 with Science background

### OBJECTIVE OF COURSE

1. This course will orient the students to Industrial Microbiology and Immunology.
2. The student will have the idea of preparation of different fermented products like yogurt, cheese, alcoholic beverages and the techniques used in the production.
3. The second unit i.e. Immunology will provide with ideas of immune system, different cells or organs of immune system, mechanism of action of immune system, role of immunoglobulins or antibodies in providing protection against foreign molecules etc.
4. It will enable them to write a review on allied field and will help them in further studies.

### LEARNING OUTCOME

This course is designed in such a way that students of under-graduation and post-graduation from any discipline of biology will find the course content interesting and will get the tools of understanding microbiology. After completion of the course, the students can apply this knowledge in their fields of research and higher education.



### COURSE PLAN

#### Week 1

- Module 1 : Introduction to Industrial Microbiology
- Module 2 : Transcription of Screening & Strain Improvement -1
- Module 3 : Transcription of Screening & Strain Improvement - 2
- Module 4 : Agenda Setting Theory

#### Week 2

- Module 5 : Fermentation Types - I Batch, Fed-batch & Continuous Fermentation
- Module 6 : Fermentation Types - II Submerged, Surface & Solid State Fermentation

Module 7 : Fermentation Equipment & Uses

Module 8 : Asepsis, Filtration, Centrifugation & Drying

#### Week 3

- Module 9 : Acetic Acid Bacteria & Other Bacteria [General Characteristics & Uses]
- Module 10 : Acetic Acid Bacteria & Other Bacteria [General Characteristics & Uses]

Module 11 : Vinegar

Module 12 : Fermented Oriental Foods - I

#### Week 4

Module 13 : Transcription of Fermented Oriental Products - II

Module 14 : Introduction & General Concept

Module 15 : Yoghurt & Some More Products

Module 16 : Microbes as Single Cell Protein

#### Week 5

Module 17 : Fermented beverages (Beer & Wine)

Module 18 : Introduction to Industrial Fermentation

Module 19 : Industrial Enzymes

Module 20 : Fermentative Products

Module 21 : Production of Antibiotic

#### Week 6

Module 22 : History of Immunology - I

Module 23 : History of Immunology - II

Module 24 : History of Immunology - III

Module 25 : History of Immunology - IV

Module 26 : Natural Barriers in Human Body

#### Week 7

Module 27 : Cells, Organs and Receptors of Immune System

Module 28 : Antigen Antibody & Immunogenicity

Module 29 : Immunoglobulin Types, Structure & Function-I

Module 30 : Immunoglobulin Types, Structure & Function-II

Module 31 : Isotype Switching & Antibody Diversity

#### Week 8

Module 32 : MHC and Monoclonal Antibody

Module 33 : Cell-mediated Immunity

Module 34 : Humoral Immunity

Module 35 : Types & Function

Module 36 : Vaccines

#### Week 9

Module 37 : Recombinant Vaccines

Module 38 : Single Radial Immunodiffusion

Module 39 : Hem agglutination & Haemolysis Module

40 : Separation Of Serum Proteins By Electrophoresis

Module 41 : Enzyme Linked Immunosorbent Assay (ELISA)

### ABOUT INSTRUCTOR

- Teacher and researcher in the Department of Microbiology, St. Xavier's College.
- Teaching in the field of immunology, virology, biochemistry etc.
- Graduate in Chemistry and post-graduation in Biochemistry from Calcutta University. PhD in Biochemistry from Bose Institute, Kolkata.
- Involved in the E-content development of UGC Microbiology syllabus in 2012-2013 in association with Educational Multimedia Research Centre (EMMRC), Kolkata.



**DR. MAHASWETA MITRA GHOSH**

Assistant Professor,  
St. Xavier's College Kolkata.

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (6<sup>th</sup> Aug, 2018 to 26<sup>th</sup> Oct, 2018)

**EXAM DATE** : Tentatively Dec, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 10+2 with Science background

**OBJECTIVE OF COURSE**

1. This course will orient the students with the basics of microbiology and its associated subjects.
2. On successful completion of the course, the student will be able to understand the diversity of microbes and their application.
3. This course will enable them to apply the acquired knowledge in the fields of other biological science.
4. It will enable them to write a review on allied field and that may be suitable for publication.

**LEARNING OUTCOME**

- This course is designed in such a way that students from any disciplines of Life Sciences will find the course content interesting and will get the tools of understanding Molecular Biology.
- After completion of the course, the students can automatically apply this knowledge in their fields of research and higher education.

**COURSE PLAN****Week 1**

Module 01: Basics of Molecular Biology

Module 02: DNA-I

Module 03: DNA-II

**Week 2**

Module 04: RNA-I

Module 05: RNA-II

Module 06: Nucleic acids I: Composition & the Different Bonds

**Week 3**

Module 07: Nucleic acids II Secondary Structures of Nucleic Acids

Module 08: Nucleic Acids III [DNA Noncanonical Structures]

Module 09: Nucleic Acids IV [Tertiary and Higher Order Structure of Nucleic Acids]

**Week 4**

Module 10: Model Organisms-I

Module 11: Model Organisms-II

Module 12: Model Organisms-III

**Week 5**

Module 13: Model Organisms-IV

Module 14: Heredity in Prokaryotes

Module 15: DNA replication: An Overview

**Week 6**

Module 16: Replication of chromosomes and cell division

Module 17: DNA Damage Repair Systems-I

Module 18: DNA Damage Repair Systems: II

**Week 7**

Module 19: DNA Damage Repair Systems: III

Module 20: Eukaryotic Transcription

Module 21: Translation - I

**Week 8**

Module 22: Translation-II

Module 23: Translation-III

Module 24: Eukaryotic Translation

**Week 9**

Module 25: The Genetic Code

Module 26: Gene Expression-I

Module 27: Gene Expression-II

**Week 10**

Module 28: Prokaryotic Gene Regulation-III

Module 29: Gene Regulation-II

Module 30: Isolation of Genomic DNA from Gram Negative Bacteria E.coli

**Week 11**

Module 31: Isolation of Genomic DNA from Plants Fungi

Module 32: Isolation of Genomic DNA from Whole Blood

Module 33: Isolation of Plasmid DNA

**Week 12**

Module 34: Gene Cloning Using Plasmid DNA Vector

Module 35: Induction by IPTG Leading to Overexpression of Protein in E.coli

**ABOUT INSTRUCTOR**

- 14 years teaching experience and presently teaches Molecular Biology, Microbial Genetics and Chemotherapeutic Agents.
- Publications in peer reviewed international journals and books.
- Successfully completed major and minor Research grants from prestigious funding agencies like CSIR and UGC.
- Has been the Head Examiner, Moderator and Examiner of different theoretical and Practical examinations in Microbiology (Honours) and Post Graduate courses under Calcutta University, Kalyani University, West Bengal State University, and West Bengal University of Technology.



**DR. ANINDITA BANERJEE**

Assistant Professor,  
St. Xavier's College Kolkata.

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (6<sup>th</sup> Aug, 2018 to 26<sup>th</sup> Oct, 2018)

**EXAM DATE** : Tentatively Dec, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 10+2 with Science background

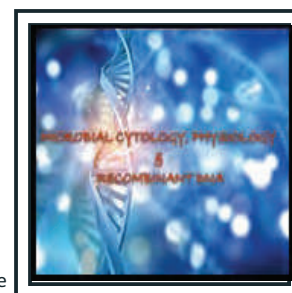
**OBJECTIVE OF COURSE**

The objectives of this course are to acquaint students with:

1. The course will help the students to have an in-depth knowledge about the thriving field of Microbiology. The discourse of knowledge will help them to provide good prospects for qualified workers.
2. The students will know about the basic concepts of bacterial growth, cell division, growth kinetics and measurement.
3. They will learn about the different physiological phenomenon occurring in bacteria.
4. This course will help them to learn about the different techniques of RDT.
5. The course will equip the students to meet the industry demands for Microbiologists.

**LEARNING OUTCOME**

- Besides Microbiology, students of any discipline of life sciences will also find this course helpful.
- The course will help them to develop a basic concept about different branches and future aspects and prospects of the subject.
- After successful completion of this course, students will be enriched, enlightened and more confident about the subject.

**COURSE PLAN****Week 1**

Module 01: Prokaryotic Cell Division

Module 02: Physiology and Phases of Bacterial Growth

Module 03: Factors affecting cell growth

**Week 2**

Module 04: Mathematics and measurement of cell growth

Module 5: Carbohydrate Metabolism –Part I

Module 6: Carbohydrate Metabolism-Part II

**Week 3**

Module 07: Carbohydrate Metabolism-Part III

Module 08: Carbohydrate Metabolism – Part IV

Module 09: Carbohydrate metabolism – Part V

**Week 4**

Module 10: Protein Metabolism –Part I

Module 11: Protein Metabolism Part II

Module 12: Protein Metabolism Part III

**Week 5**

Module 13: Cell wall

Module 14: Cell Membrane and Surface Projections.

Module 15: Structure of Prokaryotic Cell

**Week 6**

Module 16: Eukaryotic cell structure and their variations.

Module 17: Eukaryotic cell structure –(double membrane structures) Part II

Module 18: Eukaryotic cell structure and their variations (single membrane bound and membraneless organelles)- Part III

**Week 7**

Module 19: Structure and function of cell membrane

Module 20: Structure of plasma membrane: Proteins and carbohydrates.

Module 21: Introduction to transport across the plasma membrane.

**Week 8**

Module 22: Active transport across plasma membrane.

Module 23: Historical Perspective- I

Module 24: Historical perspectives-II

**Week 9**

Module 25: Historical Perspectives III

Module 26: Bacteriophage Lambda-I

Module 27: Bacteriophage lambda-II

**Week 10**

Module 28: Filamentous phage M13

Module 29: Restriction Enzymes-Part I

Module 30: Restriction enzymes-Part II

**Week 11**

Module 31: Restriction enzyme and its functional use.

Module 32: Gene cloning with different vectors.

Module 33: Gene cloning with different vectors –II

**Week 12**

Module 34: Restriction and Ligation of vectors.

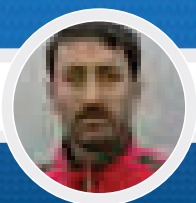
Module 35: Selection and screening of recombinant colonies.

Module 36: DNA sequencing and its applications.

**ABOUT INSTRUCTOR**

- Teaches different fields of Microbiology both undergraduate and post graduate levels in of Microbiology since 2011.
- Publications in peer reviewed international journals and books.
- Experience as National Media Resource Person: delivered lectures on different topics of Microbiology for the UGCs Country Wide Classroom programme, which are being telecasted on National Television.
- Acted as a resource person on DST sponsored “Skills and training programme in science and technology” (STST) in 2011 on selected topics on plant biotechnology.





**DR. ANZAR A. KHUROO**  
Sr. Asstt. Professor, Department of Botany,  
University of Kashmir

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 13 weeks (16/07/2018 to 13/10/2018)

**EXAM DATE** : 25/10/2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 10+2 with knowledge of Science

### OBJECTIVE OF COURSE

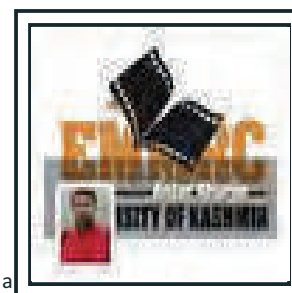
The objectives of this course are to give the target students/audience an understanding of:

- Introduction about plant systematics
- Principles of plant systematics
- Basic components of plant systematics
- Phases in plant systematics
- Contributions of plant systematics to biological sciences and to human society

### LEARNING OUTCOME

The course "Plant Systematics" is a course in the subject of Botany (BSc Hons).

- The course is specially designed to give an in-depth knowledge of plant diversity, structure and evolution, from a comparative and phylogenetic perspective.
- The students will be able to divide plants into taxonomic groups, using morphological, anatomical, embryological, chromosomal and chemical data. In order to reconstruct the evolutionary history of plant life.



### COURSE PLAN

#### Week 01:-

Introduction to Plant Systematics, Aims and Objectives of Taxonomy, Fundamental Components of Taxonomy, Palynology

#### Week 02:-

Cytology, Phytochemistry (Chemotaxonomy), Molecular data (Molecular taxonomy), Field inventory

#### Week 03:-

Herbarium, Botanical Gardens, Taxonomic literature, Identification keys

#### Week 04:-

Leaf arrangement, Diversity in leaf size and shape, Flower structure, variations, Types of inflorescences

#### Week 05:-

Types of fruits, Placentation and its types, Taxonomic Hierarchy and Ranks  
Species concept

#### Week 06:-

Botanical Nomenclature, Typification and kinds of Types, Nomenclature of Hybrids, Identification: Procedure and Methods

#### Week 07:-

Contribution of Theophrastus, Bauhin and Tournefort to plant systematics  
Contribution of Linnaeus to plant systematics, Major contributions of Adanson, de Candolle and Hutchinson to plant systematics, Major contributions of Bessey and Cronquist to Plant Systematics

#### Week 08:-

Major contribution of Takhtajan to plant systematics, Salient Features of Classification system by Bentham and Hooker, Salient Features of Classification system by Engler and Prantl, Angiosperm Phylogeny Group (APG) Classification

#### Week 09:-

Numerical Taxonomy, Cladistics: concept and terminology, Methodology of Cladistics, Origin of Angiosperms

#### Week 10:-

Evolution and Diversification of Angiosperms, A General account on primitive angiosperms, Co-evolution of flower and insects, Taxonomy and Diversity of Apiaceae

#### Week 11:-

Taxonomy and Diversity of Asteraceae, Taxonomy and Diversity of Brassicaceae, Taxonomy and Diversity of Fabaceae, Taxonomy and Diversity of Lamiaceae

#### Week 12:-

Taxonomy and Diversity of Malvaceae, Taxonomy and Diversity of Orchidaceae, Taxonomy and Diversity of Poaceae, Taxonomy and Diversity of Solanaceae

### ABOUT INSTRUCTOR

- Ph.D from University of Kashmir.
- 15 years in teaching and research.
- Area of Interest - Plant Taxonomy, Biodiversity and Conservation Biology, Plant Systematics and Phylogenetics, Biological Systematics and Biodiversity and Biogeography.
- 75 publications (Research papers and book chapters) including 39 in SCI journals.





**DR. HAREL THOMAS**

Professor, Department of Applied Geology  
 Doctor Harisingh Gour Vishwavidyalaya, Sagar (M.P.)

**TYPE OF COURSE** : Science Undergraduate (UG)

**COURSE DURATION** : 17 weeks (30<sup>th</sup> July & 2<sup>nd</sup> Dec 2018)

**INTENDED AUDIENCE** : UG

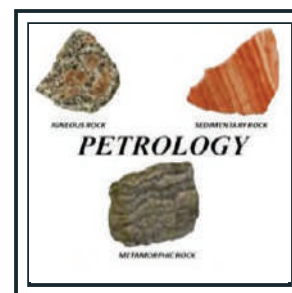
**EXAM DATE** : 29/30 November, 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduate Geology Students / Engineering graduate in Civil / Mining Engineering or any other students within and outside India are interested in course can enrolled for the this course .

**OBJECTIVE OF COURSE**

This course is a basic to advance introduction for the undergraduate students pursuing Honours degree in Geology/ B.Sc. Geology/ Engineering Graduate for Civil and Mining. The term petrology comes from the ancient Greek word Petra “rock” and Logos “explanation” that means the study of rocks and their processes of origin. This course deals with the naturally occurring rocks in field as well as laboratory analysis data that provide sufficient information how they occur in the nature. It gives idea of modern petrological theories which are widely accepted for their origin. The course definitely provides better understanding to students for the processes and principles involved during the origin and evolution of the rocks



**LEARNING OUTCOME**

- The Course aims to make to the students well-versed with the strength of Petrology theory applications in the field of Geology.
- The course definitely provides better understanding to students for the processes and principles involved during the origin and evolution of the rocks i.e. (Igneous, Sedimentary, and Metamorphic rocks).
- I hope it will be useful for the geology students within and outside India.

**COURSE PLAN**

**Week 01:** Geology & its Perspective, Carrier in Geology, Rock Cycle and Structure and classification of the silicate minerals. Daily quiz, assignments along with weekly test

**Week 02:** Internal structure & chemical composition of various layers of the Earth, interior of earth, Formation of crust and mantle, formation of core -01. Along with daily quiz and assignments along with weewekly test.

**Week 03:** Formation of core – 02; Magma: definition, composition, types and origin; Forms of igneous rocks and Texture of igneous rocks – 01 Along with daily quiz and assignments along with weewekly test.

**Week 04:** Texture of Igneous rocks – 02; Texture of Igneous rocks – 03; Structure igneous rocks and Bowen Reaction Series and Reaction Principle. Along with daily quiz and assignments along with weewekly test.

**Week 05:** Crystallization of unicomponent and bicomponent (mix-crystals); igneous rocks and Intrusive igneous rocks. . Along with daily quiz and assignments along with weewekly test

**Week 06:** Mineralogical and chemical classification of igneous rocks; Detailed petrographic description of Granite, Granodiorite, Rhyolite, Syenite, Phonolite, Diorite, Gabbro and Mineralogical characteristics of acid igneous rocks and alkaline rocks. Along with daily quiz and assignments along with weewekly test.

**Week 07:** Mineralogical characteristics of basic igneous rocks and ultramafic rocks; origin of sediments and Processes of formation of sedimentary rocks. Along with daily quiz and assignments along with weewekly test.

**Week 08:** Lithification and Diagenesis; Sedimenatry rocks; Classification of sedimentary rocks and Classification of sedimentary rocks based on grain size. Along with daily quiz and assignments along with weewekly test.

**Week 09:** Structure of sedimentary rocks, Texture of sedimentary rocks, Petrographic details of important siliciclastic and carbonate rocks such as - conglomerate, breccia, sandstone, greywacke, shale, limestones; Definition of metamorphism and Factors controlling metamorphism. Along with daily quiz and assignments along with weewekly test.

**Week 10:** Variables / agents and types / kinds of metamorphism – contact, regional, fault zone metamorphism, impact metamorphism; Types of metamorphism and classification based on metamorphic agent and Metamorphic facies and metamorphic grade. Along with daily quiz and assignments along with weewekly test.

**Week 11:** Index minerals, chemographic projection, graphical representation of metamorphic minerals assemblages; ACF, AKF and AFM etc, Other diagram.; Metamorphic zones, isogrades and reaction isograde and Concept of classification of metamorphic facies, facies-series and grade. Along with daily quiz and assignments along with weewekly test

**Week 12:** Structure and texture of metamorphic rocks; Description of facies; facies of low pressure: Albite epidote facies Hornblende hornfels facies and Pyroxene hornfels facies. Along with daily quiz and assignments along with weewekly test.

**Week13:** Pyroxene hornfels facies; Sanidinite Facies Description of facies; facies of medium to high pressure Zeolite facies and Green Schist Facies. Along with daily quiz and assignments along with weewekly test.

**Week 14:** Amphibolite facies; Ganulite Facies and Description of facies; facies of very high pressure. Blue schist & Eclogite facies. Along with daily quiz and assignments along with weewekly test.

**Week 15:** Regional metamorphism of pelitic rocks – 1; Regional metamorphism of pelitic rocks – 2 and Basic and Ultrabasic rocks. Along with daily quiz and assignments along with weewekly test.

**Week 16:** Thermal metamorphism of pelitic rocks; Thermal metamorphism of calcareous rocks and Different types of Metamorphic reactions. Along with daily quiz and assignments along with weewekly test.

**Week 17:** Petrographic details of some important metamorphic rocks such as - slate, phyllite, schists, gneiss, quartzite, marble, charnockite, Leptynite etc; Migmatites and Metasomatism & Differentiation. Along with daily quiz and assignments along with weewekly test.

**ABOUT INSTRUCTOR**

- Served as a Reader in the Department of Geology, Mizoram Central University, Aizawl in year 2004.
- Supervised Doctorate Degrees.
- He has been instrumental in the publication of one volume on Metamorphism and Crustal Evolution in year 2005.
- Delivered Massive Open Online Course (MOOC) on petrology for undergraduate students of Geology. The course has successfully completed two cycles with rating of 4.9 out of 5. During first cycle (7th Nov. 2016 to 5th March 2017) more than 706 students were enrolled and in 2nd cycle (24th July to 25th Nov. 2017) nearly 464 students were enrolled. The course has completed both cycles with examination and result declaration.



**DR. GAURAV K.SINGH**

Assistant Professor of Applied Geology

**TYPE OF COURSE** : UG**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School**COURSE DURATION** : 16 weeks (31/07/2018 to 20/11/2018)**EXAM DATE** : will be conducted on fifth day of every week.**NO OF CREDITS** : 4**PRE-REQUISITES** : The only Pre-requisite of this course is that the candidate should be familiar with basic terms of geology and be attentive with the course.**OBJECTIVE OF COURSE**

We are going to tell you through science of layers and biology of rocks that the past events on earth can at least be partially traced. Sediments are usually laid down in rivers, oceans and lakes as strata preserving hard and sometimes even soft and delicate parts of the life forms that can in turn be visualised as space-time slices. These preservations reveal many interesting features related to evolution of living creatures and their billions of descendants. Now, you can have a chance to think like who saw the world for the first time and how the present life forms were evolved.

**LEARNING OUTCOME**

The entire core course in to eight units, the successful completion of which will not only enrich learners knowledge of the Science of layers and Palaeontology but will also train young minds to think which is an essential aspect of any education in the world.

**COURSE PLAN**

**Week 01** : Day 1-Introduction to Stratigraphy and Geological Time Scale, Day 2-Physical and Structural subdivisions of India, Day 3-Schist Belts of Dharwar, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 02** : Day 1-Cuddapah Super Group of Rocks, Day 2-Vindhyan Supergroup, Day 3-Stratigraphy of Delhi Supergroup, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 03** : Day 1-Palaeozoic of NW Himalaya, Day 2-Triassic of Spiti, Day 3-Mesozoic type section of Kutch and Rajasthan, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 04** : Day 1-Cretaceous of Trichinopoly, Day 2-Study of Gondwana Super Group, Day 3-Deccan Trap, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 05** : Day 1-Palaeogene succession of India, Day 2-Neogene succession of India, Day 3-Basic idea of Palaeontology, Evolution and Origin of life, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 06** : Day 1-Identification of fossils and Codes of Systematic Nomenclature, Day 2-Preservation Potential of Organisms and Morphology of Gastropoda, Day 3-Applications of Palaeontological data in Palaeoecology and a brief idea of Palaeogeography, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 07** : Day 1-Morphology and Geological Distribution of Brachiopoda, Day 2-Morphology and geological distribution of Pelecypods, Day 3-Morphology and geological distribution of Cephalopoda, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 08** : Day 1-Morphology and geological distribution of Trilobites, Day 2-Morphology and geological distribution of Echinoides, Day 3-Evolutionary history of Horse, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 09** : Day 1-A brief study of Plant Fossils, Day 2-Type localities of Gondwana succession and morphology, distribution & significance of Gondwana flora, Day 3-Basic Principles of Palaeoenvironment and Palaeoclimate Analysis, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 10** : Day 1-The Elements of Sequence Stratigraphy-1, Day 2-The Elements of Sequence Stratigraphy-2, Day 3-Introduction to Microfossils, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 11** : Day 1-Stratigraphic Correlation, Day 2-Evolution and Stratigraphy-I Day 3-Evolution and Stratigraphy-II, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 12** : Day 1-Career in Geology, Day 2-Guides and criteria for locating ore deposits: stratigraphic, lithological, structural, geomorphological, palaeogeographic and palaeoclimatic criteria, Day 3-Distribution of some fossil groups, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 13** : Day 1-Life through Ages, Day 2-Study of Aravalli Group, Day 3-PHYSIOGRAPHIC DIVISIONS OF INDIA, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 14** : Day 1-A Brief idea about Vertebrate Fossils-I, Day 2-A Brief idea about Vertebrate Fossils-II, Day 3-Earth's History: Ontogeny and variation in fossil assemblages, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 15** : Day 1-Morphology and Distribution of Anthozoa, Day 2-Morphology and Distribution of Arthropoda, Day 3-Palaeozoic of NW Himalaya, Day 4-Self Reading Material, Day 5-Assignment and Interaction/Forum activity

**Week 16** : Day 1-Cretaceous of Trichinopoly, Day 2-Identification of fossils and Codes of Systematic Nomenclature, Day 3-Introduction to Microfossils, Day 4-Text for self reading, Day 5-Final Assignment and Interaction/Forum activity

**ABOUT INSTRUCTOR**

- BSc. MSc. And PhD.: University of Lucknow.
- Two years experience in Geological Survey of India (GSI) and three years research experience from Birbal Sahni Institute of Palaeobotany, Lucknow (U.P.).
- Joined Sagar University as an Assistant Professor of Applied Geology in December 2013.





## (DR.) SANJIV KUMAR

Professor, School of Sciences, Indira Gandhi National Open University (IGNOU),  
Maidan Garhi, New Delhi

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 5 weeks (06/08/2018 & 31/12/2018)

**EXAM DATE** : 10 /01/2019( 10 days after end date of course

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Student must have 10+2 passed with science stream. Students must have basic understanding of inorganic chemistry of 10+2 level.

### OBJECTIVE OF COURSE

The Course is aimed to:

- Demonstrate the inadequacy of classical mechanics and argue for the need of a new theory.
- Explain the concept and consequences of quantisation and outline the postulates of quantum mechanics.
- Describe the quantum mechanical approach for H-atom and discuss the results obtained. State rules for filling of electrons in different orbitals and discuss the electronic configurations including the anomalous ones.
- Discuss the classical theories of Chemical Bonding and outline their limitations.
- Explain the valence bond and molecular orbital theories of chemical bonding and differentiate between them.
- Describe the process of formation of ionic compounds, their lattice energy and dissolution process.
- Give an account of weak interactions



### LEARNING OUTCOME

The learner should be able to:

- List the inadequacy of classical mechanics and discuss about the new theories.
- Know the concept and consequences of quantisation and the postulates of quantum mechanics.
- Understand the quantum mechanical approach for H-atom. Will be able to fill electrons in different orbitals and discuss the electronic configurations and anomalous examples
- Understand the classical theories of Chemical Bonding and outline their limitations. Explain the valence bond and molecular orbital theories of chemical bonding and differentiate between them.
- Understand the process of formation of ionic compounds, their lattice energy and dissolution process.

### COURSE PLAN

**Week 1:** Inadequacy of Classical Mechanics and Origin of Quantum Mechanics

**Week 2:** Wave Mechanics: application to model systems and hydrogen atom

**Week 3:** Chemical Bonding 1: Classical theories and Valence bond theory

**Week 4:** Chemical Bonding 2: Molecular orbital theory and metallic bonding

**Week 5:** Chemical Bonding 3: Ionic bonding

### ABOUT INSTRUCTOR

- Over 27 years teaching experience and has been associated with teaching at undergraduate and postgraduate level.
- Associated with the Coordination and development of e-content modules under NMEICT project for the B.Sc. Chemistry courses as per the UGC's Model Curriculum.
- Areas of interest are Quantum chemistry, Spectroscopy, Biochemistry and Analytical Chemistry.





## DR AMAR BALLABH

Assistant professor, Department of Chemistry, Faculty of Science,  
The Maharaja Sayajirao Univ. of Baroda, Vadodara

## PROF. PRASANNA S. GHALSASI

Professor, Department of Chemistry, Faculty of Science, The  
Maharaja Sayajirao Univ. of Baroda, Vadodara

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 14 weeks (6<sup>th</sup> Aug & 18<sup>th</sup> Nov, 2018)

**EXAM DATE** : 28th November 2018 (Approximately)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Students must have the basic understanding of Quantum Chemistry, Spectroscopy & Photochemistry. This course is intended to 5th semester students of B.Sc. Chemistry and B.Sc. Physical Science (Physics, Chemistry and Mathematics).

This course will also be beneficial for those students who have completed their BSc and are preparing for certain competitive examinations.

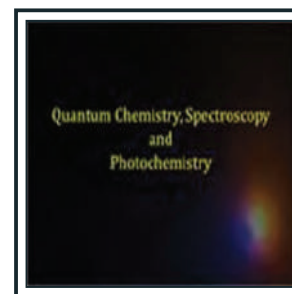
The advantage of the course may be taken by those students also who are pursuing Master's degree in Chemistry and intend to brush up their basics.

### OBJECTIVE OF COURSE

This course will cater to 3rd semester of CBCS based curricula of B.Sc. Chemistry and B.Sc. Physical Science (Physics, Chemistry and Mathematics) under the Discipline Specific Elective paper 'Chemistry-DSE "QUANTUM CHEMISTRY, SPECTROSCOPY & PHOTOCHEMISTRY"

### LEARNING OUTCOME

After successfully completing this course, students will be able to understand and comprehend: Quantum Chemistry, Chemical Bonding, Molecular Spectroscopy, Nuclear Magnetic Resonance (NMR) Spectroscopy, Electron Spin Resonance (ESR) Spectroscopy, Photochemistry.



### COURSE PLAN

The course is divided in three parts i.e. Quantum Chemistry, Spectroscopy and Photochemistry

**Week 01:** - i) Postulates of Quantum Mechanics, ii) Particles in One-dimensional Box, iii) Particles in One-dimensional Box & its applications

**Week 02:** - i) Particle in Three-dimensional Box and Separation of Variables, ii) Quantum Mechanical Treatment of Simple System (simple harmonic oscillator model), iii) Quantum Mechanical treatment of simple system (Angular Momentum)

**Week 03:** - i) Quantum Mechanical Treatment of Simple System (Rigid Rotator model of diatomic molecule), ii) Hydrogen Atom-I: Designing and Processing the Schrodinger Wave Equation (SWE), iii) Hydrogen Atom-II: Solutions of R,  $\theta$  and  $\phi$  Equations

**Week 04:** - i) Hydrogen Atom-III: Shapes of Orbitals, ii) Hydrogen Molecule ion, iii) Energy expressions and wave functions for hydrogen molecule ion

**Week 05:** - i) Molecular orbital theory, ii) Valence Bond Theory, iii) Valence Bond Theory - Hybridisation

**Week 06:** - i) Nature of radiation, ii) Nature of Matter and its Interaction with Radiation, iii) Types of spectra and their characteristics

**Week 07:** - i) Basic Aspects of Instruments for Molecular Spectroscopy, ii) Different types of detectors used in instruments used for spectroscopic measurements, iii) Origin and Nature of Rotational Spectra

**Week 08:** - i) Non-rigid and Isotropic Substitution, ii) Origin of Vibrational Spectrum, iii) Nature and Polyatomic Molecules

**Week 09:** - i) Group frequencies and Factors Affecting them, ii) Origin of Raman Effect, iii) Pure Rotational and Vibrational Raman Spectra

**Week 10:** - i) Diatomic Molecules, ii) Franck Condon Principle, iii) Introduction to NMR Spectroscopy

**Week 11:** - i) NMR Spectroscopy- Relaxation Phenomena, ii) NMR Spectroscopy - CW and FT concept, iii) What is Chemical Shift?

**Week 12:** - i) NMR Spectroscopy- Structure and Chemical Shift, ii) NMR Spectroscopy- Splitting and Coupling Constants, iii) NMR Spectroscopy- Functional Group and Chemical Shift

**Week 13:** - i) NMR Spectroscopy- Interpretation of NMR Spectra, ii) ESR Spectroscopy, iii) Absorption Phenomena

**Week 14:** - i) Photophysical process, ii) Luminescence, iii) Quantum Yield Perspective, iv) Photochemistry - An Application

**Week 15:** - Proctored examination & Final Assessment

### ABOUT INSTRUCTOR

#### Dr. Amar Ballabh

- Assistant Professor, Department of Chemistry, The Maharaja Sayajirao University of Baroda.
- Teaching experience of over 11 years in teaching Physical and Polymer Chemistry to UG and PG students.
- Research areas of interest are Crystal Engineering, Supramolecular Chemistry, Material Chemistry and possesses research experience of more than 16 years.
- Guided 2 research students for their PhD degree.

#### Prof. Prasanna S. Ghalsasi

- Professor, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara (since 2012).
- Postdoc in USA and Japan for nearly 5 years.
- Likes to teach undergraduate chemistry courses.
- Involved in Chemistry and Science Olympiad activity.
- Reviewed four World Edition books from Pearson Publisher in basic chemistry.
- Occupied with undergraduate research activity, recently under aegis of HBCSE, Mumbai (NIUS).
- Research, completed 5 research projects, on molecular materials, especially organic magnets and organic ferroelectrics
- Guided 4 PhD students and 20 MSc dissertations.





**DR. LALITA S. KUMAR**

Associate Professor, School of Sciences, Indira Gandhi National Open University (IGNOU),  
Maidan Garhi, New Delhi

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 8 weeks (9/17/2018 & 31/12/2018)

**EXAM DATE** : 11/ 01/2019 (TENTATIVE)

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Student must have 10+2 passed with science stream. Students must have basic understanding of organic chemistry of 10+2 level.

**OBJECTIVE OF COURSE**

The course will cover following topics of 'Organic Chemistry-I':

1. Fundamentals of Organic Chemistry,
2. Stereochemistry, and
3. Aliphatic Hydrocarbons

**LEARNING OUTCOME**

After successfully completing this course, students will be able to understand and comprehend:

- Fundamentals of Organic Chemistry. Stereochemistry of organic compounds. Chemistry of Aliphatic Hydrocarbons such as Alkanes, Alkenes, Alkynes in terms of their preparation, physical properties and chemical reactions.
- This course will also be beneficial for those students who have completed their BSc and are preparing for certain competitive examinations.
- The advantage of the course may be taken by those students also who are pursuing Master's degree in Chemistry and intend to brush up their basics.

**ABOUT INSTRUCTOR**

- M.Sc., Ph.D. (Chemistry), M.A. (Distance education),
- Teaching experience of over 27 years
- Associated with the design and development of distance learning materials for the certificate, diploma and degree level programmes.
- Published several articles in national and international journals of repute.
- Research areas of interest- Reaction Mechanism, Stereochemistry, Biochemistry, Environmental Chemistry and Mobile learning.



**DR. A. A. AJMERI**

Assistant Professor (Stage-III), Department of Chemistry,  
Faculty of Science, The Maharaja Sayajirao  
University of Baroda

**DR. AMAR BALLABH**

Assistant Professor, Department of Chemistry, Faculty of  
Science, The Maharaja Sayajirao University of  
Baroda

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 15 weeks (8/6/2018 to 27/11/2018)

**EXAM DATE** : 21-12-18, tentative

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Student must have 10+2 passed with science stream. Students must have basic understanding of Physical chemistry and Organic chemistry of 10+2 level.

**OBJECTIVE OF COURSE**

This course will cater to B.Sc. Chemistry and B.Sc. Physical Science (Physics, Chemistry and Mathematics) under the paper 'Chemistry-DSC 2C: 'Solutions, Phase Equilibrium, Conductance, Electrochemistry & Functional Group Organic Chemistry-II'. It will also cater to Generic Elective paper namely 'Solutions, Phase Equilibrium, Conductance, Electrochemistry & Functional Group Organic Chemistry-I' of B.Sc. Honours with Chemistry CBCS syllabus.

**LEARNING OUTCOME**

- students will be able to understand and comprehend: Solutions, Phase Equilibrium, Conductance, Electrochemistry, Carboxylic Acids and their derivatives, Carboxylic Acids derivatives(aliphatic), Amines and Diazonium Salts, Amino Acids, Peptides and Proteins.
- The advantage of the course may be taken by those students also who are pursuing Master's degree in Chemistry and intend to brush up their basics.

**COURSE PLAN**

**Week 01:** - i) Ideal/ non-ideal solution and derivation of Raoult's law, ii) Vapour pressure of ideal/ non-ideal solution, iii) Vapour pressure-composition and temperature-composition curves of ideal and non-ideal solutions, iv) Azeotropic and partial miscible liquid systems

**Week 02:** - i) Nernst's distribution law and its application, ii) Nernst's distribution law and its other remaining applications, iii) Introduction (system, equilibrium and phase rule), iv) Concepts on Phase rule, Phase, component and degrees of freedom

**Week 03:** - i) Derivation of Phase rule and its application on different systems, ii) Effect of variation of thermodynamic parameters on phase equilibrium of different systems, iii) Derivation of Clausius-Clapeyron equation and its application, iv) Phase diagram of one-component system (water and sulphur)

**Week 04:** - i) Two component system (simple eutectic system), ii) Two component system (congruent and incongruent melting), iii) Phase diagram of simple system (FeCl<sub>3</sub>-H<sub>2</sub>O and lead-silver), iv) Phase diagram of Sodium-Potassium system

**Week 05:** - i) Conductivity, equivalent and molar conductivity and effect of dilution, ii) Kohlrausch law and theory of weak electrolyte, iii) Transport number ( or Transference number) and theory of strong electrolyte, iv) Applications of conductivity measurement

**Week 06:** - i) Basic of electrochemistry, ii) Understanding electrode potential and measurement of cell potential, iii) Thermodynamics of a reversible cell and calculation of thermodynamic parameter, iv) pH and Buffer solution

**Week 07:** - i) Types of electrodes, pH determination and concentration cell, ii) Applications of electrochemistry, iii) Definition, Structure, IUPAC names and Preparations of Carboxylic acids. iv) Properties, pKa values and Relative strength of Carboxylic acids.

**Week 08:** - i) Chemical Properties of Carboxylic acids, Directing influence and Kolbe's Electrolysis. ii) Preparation, reactions and uses of Hydroxy acids, iii) Preparation, reactions and uses of Dicarboxylic acid, iv) Preparation, reactions and uses of Unsaturated Dicarboxylic acid

**Week 09:** - i) Hydrolysis of esters, Named reactions: HVZ, Perkin and Reformatsky reactions, ii) Structure, Naming, Classification and interconversion of Carboxylic acid derivatives, iii) Preparation and uses of Carboxylic acid derivatives, Rosenmund's and Schotten-Baumann reactions, iv) Preparations, transesterifications, ammonolysis and reductions of esters.

**Week 10:** - i) Classification, Nomenclature and Properties of Amines, ii) Basicity and Effect of substituents on properties of Amines, iii) Preparations of Amines: Gabriel-phthalimide, Hofmann degradation, Ammonolysis and reductions, iv) Reactions of Amines

**Week 11:** - i) Hofmann vs. Saytzeff elimination, Hinsberg Test and Phase-transfer Catalysis. ii) Diazotization, Sandmeyer and Coupling reactions, iii) Electrophilic substitution reaction: Difficulties and their solutions, Desired isomer Conversions, iv) Structures, Importance and Classification of Amino acids.

**Week 12:** - i) Zwitter ion, Isoelectric points and Stereochemistry of Amino acids ii) Synthesis and Chemical reactions of Amino acids, iii) Structure, IUPAC names and Hydrolysis of Peptides, iv) Synthesis of Peptides: Liquid and Solid Phase synthesis

**Week 13:** - i) Introduction, Classification and Denaturation of Proteins, ii) Nucleosides, Nucleotides and Nucleic Acids: DNA, RNA iii) Comparison and Occurrence of classified Proteins, Coloured, Reactions of Proteins iv) Definition, Naming, Structure and General Uses(Carbohydrates)

**Week 14:** - i) Epimerisation, Increase and decrease of Chain and Osazone formation, ii) Configurations, Threo and Erythro Nomenclature. iii) Cyclic, Haworth and Conformational structures, Mutarotation.

**Week 15:** - i) Monosaccharides, Glycosides and Ring size determination, ii) Introduction to Disaccharides, Polysaccharides and Sweetness of Sugars.

**ABOUT INSTRUCTOR****Dr. A. A. Ajmeri**

- Served as a Higher Secondary Teacher of Chemistry in an esteemed CBSE institution 'Bhartiya Vidya Bhavan's School, Vadodara.
- Lecturer in Chemistry at The MS University of Baroda in 1999 for B.Sc. and M.Sc.
- Awarded C. C. Shroff Research Scholarship in 1998.
- Area of research is Synthetic Organic Chemistry and working on building up seven membered  $\beta$ -lactam and sydnone ring on biological active compounds.

**Dr. Amar Ballabh**

- Assistant Professor, Department of Chemistry, The Maharaja Sayajirao University of Baroda.
- Teaching Experience -11 years - Physical and Polymer Chemistry to UG and PG students.
- Research areas of interest are Crystal Engineering, Supramolecular Chemistry, Material Chemistry and possesses research experience of more than 16 years.





## PROF. PRASANNA S GHALSASI

Professor, Faculty of Science, The Maharaja Sayajirao University of Baroda

## DR. RAJENDRASINH JADEJA

Professor, Faculty of Science, The Maharaja Sayajirao University of Baroda

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (6/8/2018 & 28/10/2018)

**EXAM DATE** : Exam date of the course, probably, will be 10 days after successful completion of the course and course content

**NO OF CREDITS** : 4

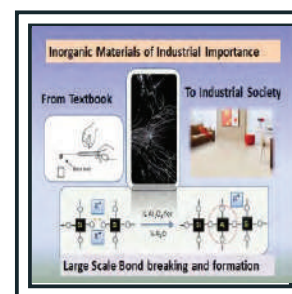
**PRE-REQUISITES** : Student must have 10+2 passed with science stream. Students must have basic understanding of Inorganic chemistry of 10+2 level.

### OBJECTIVE OF COURSE

Course will cover following topics: 1. Recapitulation of s- and p-Block Elements, 2. Silicate Industries, 3. Fertilizers, 4. Surface Coatings, 5. Batteries, 6. Alloys, 7. Catalysis, 8. Chemical Explosives.

### LEARNING OUTCOME

- Uniqueness of the course relies on addition of history component in few topics, to understand importance of civilization and need of industrialization along with present challenges in the industrial chemistry. Novel efforts are also made to incorporate visualization of industrial chemical process in some topics.
- After successfully completing this course, students will be able to understand and comprehend s- and p-Block Elements.
- This course will increase maturity to understand intricacies in industrial process such as silicate, Fertilizers, Surface Coatings, Batteries, Alloys, Catalysis, Chemical Explosives and glasses.
- This course will also be beneficial for those students who have completed their BSc and are looking for job or entrepreneurship.
- The advantage of the course may be taken by those students who are going to pursue Master's degree in Chemistry and intend to carry out research.
- Overall, this course will benefit student to understand industrial surrounding around us and living leader in the knowledge 'hungry' society.



### COURSE PLAN

#### Week-1

Recapitulation of s- and p-Block Elements -1, Recapitulation of s- and p-Block Elements -2, Recapitulation of s- and p-Block Elements -3, Recapitulation of s- and p-Block Elements -4, Recapitulation of s- and p-Block Elements-5

#### Week-2

Recapitulation of s- and p-Block Elements-6, Recapitulation of s- and p-Block Elements-7, Recapitulation of s- and p-Block Elements-8, Recapitulation of s- and p-Block Elements-9

#### Week-3

Silicate Industries-1, Silicate Industries -2, Silicate Industries -3

#### Week 4

Glasses: History and Development, Glasses: Structural Chemistry, Glasses: Challenges

#### Week 5

Cement: Development and Manufacturing, Cement: Structural Understanding, Cement: Chemistry Behind Cement

#### Week-6

Fertilizers- History and Need, Fertilizers – Nitrogenous, Fertilizers – Phosphatic and Challenges

#### Week -7

Fertilizers-1  
Fertilizers-2  
Fertilizers-3

#### Week-8

Surface Coatings -1  
Surface Coatings -2  
Surface Coatings -3  
Surface Coatings -4

#### Week-9

Batteries -1  
Batteries -2  
Batteries -3

#### Week-10

Alloys-1  
Alloys-2  
Alloys-3  
Alloys-4

#### Week-11

Catalysis-1  
Catalysis-2  
Catalysis-3

#### Week-12

Chemical Explosives  
Proctored examination & Final Assessment

### ABOUT INSTRUCTOR

#### Prof. Prasanna S. Ghalsasi

- Postdoc in USA and Japan for nearly 5 years.
- Likes to teach undergraduate chemistry courses.
- Involved in Chemistry and Science Olympiad activity.
- Reviewed four World Edition books from Pearson Publisher in basic chemistry.
- Occupied with undergraduate research activity, recently under aegis of HBCSE, Mumbai (NIUS).
- He is active in research, completed 5 research projects, on molecular materials, especially organic magnets and organic ferroelectrics with 4 PhD students and around 20 MSc dissertations.

#### Dr. Rajendrasinh Jadeja

- Over 12 years teaching experience.
- Published more than 50 research papers in National and International Journals of repute along with authoring one book.
- Guided 4 PhD. students





**PROF. ZAFAR A. RESHI**  
 Professor, Department of Botany,  
 University of Kashmir

**TYPE OF COURSE : UG**

**INTENDED AUDIENCE : UG**

**COURSE DURATION : 12 weeks (27/08/2018 to 17/11/2018)**

**EXAM DATE : 27/11/2018**

**NO OF CREDITS : 4**

**PRE-REQUISITES : 10+2 with Science background**

**OBJECTIVE OF COURSE**

The objectives of this course are to acquaint students with:

- The local and geographical distribution and abundance of organisms (habitat niche, community,
- The inter-relationship between organism in population and communities (population ecology).
- Temporal changes in the occurrence, abundance and activities of organisms (seasonal, annual, successional).
- The structural adaptations and functional adjustment of organisms to their physical environment.
- The biological productivity of nature and its relations with mankind.
- The conservation and management of natural resources and pollution (applied ecology).

**LEARNING OUTCOME**

The course “Ecology and Environmental Pollution” is a core course in B.Sc. Botany under the Choice Based Credit System (CBSE). The course has been drawn up to provide the students theoretical understanding of the principles of ecology and also sensitive the students about the global problems of environmental pollution, particularly climate change, acid rain, stratospheric ozone depletion as well the local environmental issues of air, water and soil pollution.



**COURSE PLAN**

**Ecological niche**

Atmosphere—composition and stratification, Light—Quality vs quantity (Global radiation budget, PAR), Soil development (weathering and factors influencing soil development), Soil profile, Physical properties of soil (texture and soil structure), Chemical properties of soil (pH and soil nutrient status)

**Ion exchange and uptake of nutrients by plants**

Morphological and anatomical responses of plants to water, Physiological responses of plants to water stress, Morphological, anatomical and physiological adaptations of plants to light, Morphological, anatomical and physiological responses of plants to salinity, Population characteristics, Presentation of demographic data (life tables, survivorship curves etc.)

**Population Regulation**

**Population Interactions**

**Community concept**

Community characteristics (Analytic and Synthetic), Ecological Succession: Types and concept of climax community, Ecosystem Structure: biotic (food chains, food webs) and abiotic components; ecological pyramids

**Primary productivity and factors influencing primary productivity**

Energy flow in an autotroph and detritus based ecosystems, Biogeochemical carbon cycle: Forms of carbon; pools and fluxes, Biogeochemical nitrogen cycle: Forms of nitrogen; pools and fluxes; processes that bring about cycling of nitrogen through/across various reservoirs, Biogeochemical phosphorus cycle: Forms of phosphorus; pools and fluxes; processes that bring about cycling of phosphorus through/across various reservoirs, Biogeographic regions of India

Vegetation types of India

Global Warming

Concept of exotic species

Concept of sustainable development Nuclear Pollution

Acid Rain

Ozone depletion

Noise Pollution - I

Noise Pollution – II

Thermal Pollution

Climate Change

Problems in enforcement of environmental legislation

Photochemical Smog

Pollution

case studies – I: Air Pollution and Industrial Disaster

Pollution case studies – II: Water and Soil Pollution

Air Pollution

Water Pollution

Soil Pollution

Marine Pollution

Prevention of pollution

Definition: Genetic, Species and Ecosystem diversity

Value of biodiversity: Consumptive use, productive use, social, ethical and aesthetic and option values

Threats to biodiversity: Habitat loss, poaching of wildlife, man-life conflicts

Biodiversity at Global, national and local level

In-situ Conservation of biodiversity

Ex-situ conservation of biodiversity

Hotspots of biodiversity - I

Hotspots of biodiversity - II

India as a mega diversity nation

Endangered and endemic species of India

**ABOUT INSTRUCTOR**

- Masters degree in Botany, pursued M.Phil and Ph.D in the field on ecosystem ecology and resource management with special focus on alien plant invasions and weeds.
- More than 25 year of teaching experience at post-graduate level.
- Published 130 research papers in journal of international and national repute.
- Supervised more than 30 students for their M.Phil and Ph.D programmes.
- Work has been cited widely by other workers and at present has more than 800 citations with h index of 15 and i10-index of 25.





**DR. SYED WILAYAT RIZVI**

Associate Professor in Botany, Higher Education Department,  
Government of Jammu and Kashmir

**TYPE OF COURSE : UG**

**INTENDED AUDIENCE : UG**

**COURSE DURATION : 12 weeks (06/08/2018 to 27/10/2018)**

**EXAM DATE : 27/11/2018**

**NO OF CREDITS : 4**

**PRE-REQUISITES : 10+2 with Science background**

**OBJECTIVE OF COURSE**

The objectives of this course are to enable students:

- to seek base line information about microbial world including their metabolism, diversity and classification.
- to know about structural variations, reproduction and life cycles of viruses, viroids, prions, bacteria and algae.
- to learn about the diseases caused by viruses, prions, viroids and pathogenic bacteria.
- gain basic understanding about the significance of viruses in vaccine production, medicine, diagnosis of diseases and other aspects our day to day life.
- to understand the relationship of microbes with our environment at local and global level.

**LEARNING OUTCOME**

The course "Ecology and Environmental Pollution" is a core course in B.Sc. Botany under the Choice Based Credit System (CBSE). The course has been drawn up to provide the students theoretical understanding of the principles of ecology and also sensitive the students about the global problems of environmental pollution, particularly climate change, acid rain, stratospheric ozone depletion as well the local environmental issues of air, water and soil pollution.



**COURSE PLAN**

Diversity of Microbes

Microbial nutrition

Microbial growth Microbial metabolism

Economic importance of viruses

Economic importance of Bacteria

**Viruses**

Viruses: A General Account, Discovery and physiochemical and biological, characteristics of viruses, Classification of viruses (Baltimore) Viruses: general structure, Viroids, Prions, Replication in viruses, Viruses: Lytic and lysogenic cycles, DNA viruses (T-phage), Riboviruses (TMV)

**Bacteria**

Discovery and general characteristics of Bacteria, Classification of Bacteria, Archaeobacteria, Eubacteria and their types, Mycoplasma: General account, Sphaeroplasts, Bacteria: cell structure, Bacteria: Nutritional types Reproduction in Bacteria, Bacterial recombination

**Algae**

Algae: general characters and classification, Algae: Ecology and distribution, Range of thallus organization in green algae, Cell wall in Algae, Cell structure and components in algae, Pigment system in algae, Reserve food and flagella in algae, Methods of reproduction in algae, Criteria for classification of algae, Significant contributions of phycologists (F.E.Fritsch, G.M. Smith, R.N. Singh, T.N. Desikachary, H.D. Kumar and M.O.P. Iyenger), Role of algae in environment, agriculture, biotechnology and industry / economic importance of Algae

**Cyanobacteria / Cyanophyta & Xanthophyta**

Ecology, occurrence and range of thallus organization in Cyanobacteria, Cell structure and Reproduction in Cyanobacteria, Nostoc - Morphology and Life cycle, Ecology, occurrence and range of thallus organization in Xanthophyta, Cell structure and Reproduction in Xanthophyta, Vaucheria: Morphology and Life cycle

**Chlorophyta and Charophyta**

General characteristics of Chlorophyta, Occurrence, thallus organization and cell structure in Chlorophyta, Reproduction in Chlorophyta, Chlamydomonas: Morphology and life cycle, Volvox: Morphology and life cycle, Oedogonium: Morphology and life cycle, Coleochaete: Morphology and life cycle, General characteristics of Charophyta, Chara: Morphology and life cycle, Evolutionary significance of Prochloron

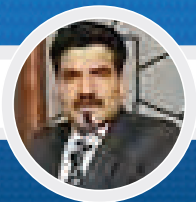
**Phaeophyta and Rhodophyta**

General characteristics of Rhodophyta, Occurrence, thallus organization and cell structure in Rhodophyta, Reproduction in Rhodophyta, Ectocarpus: Morphology and life cycle, Fucus: Morphology and life cycle, Polysiphonia: Morphology and life cycle

**ABOUT INSTRUCTOR**

- Masters in Botany , M.Phil and Ph.D. in Plant Tissue Culture from University of Kashmir
- Developed complete protocol for cloning of Ambri, Golden Delicious, Chambura and Maharaji varieties of Apple (Malus pumila Mill).
- Served in Higher Education Department for more than 23 years and has vast experience in teaching undergraduate and Post graduate students in Botany.
- Published many research papers and some Books in Botany for Undergraduate students.



**PROF. BASHIR AHMAD GANAI**

Professor (Biochemistry), Centre of Research for Development,  
University of Kashmir, Srinagar, J&K

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (30/07/2018 to 20/10/2018)

**EXAM DATE** : 31/10/2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : 10+2 with knowledge of Science

**OBJECTIVE OF COURSE**

The objectives of this course are to give the target students/audience an understanding of:

- Nucleic acids convey Genetic information
- The Structures of DNA and RNA / Genetic Material
- Genome structure, chromatin and the nucleosome
- The Replication of DNA (Prokaryotes and Eukaryotes)
- The Mutability and Repair of DNA
- Mechanism of transcription & RNA modifications
- Translation (Prokaryotes and Eukaryotes)
- Transcription Regulation in Prokaryotes & Eukaryotes, Regulatory RNAs
- Isolation and estimation of genomic DNA/RNA and molecular weight determination and separation of proteins.

**LEARNING OUTCOME**

- The course "Molecular Biology" is a core course in B.Sc. Medical sciences and M.Sc Biochemistry, Clinical Biochemistry, Biotechnology, M.Sc Zoology, M.Sc Bio resource, M.Sc Botany and M.Sc Microbiology under the Choice Based Credit System (CBSE).
- The course is specially designed to supplement and enhance the understanding of students about different dimensions of molecular biology.

**COURSE PLAN****Week 1**

1. DNA Structure Miescher to Watson and Crick-Historic Perspective, 2. DNA as carrier of Hereditary Information, 3. DNA and different types of DNA, 4. Types of Genetic Material 5. Chemistry of DNA Synthesis 6. Chromatin Structure: Euchromatin heterochromatin- constitutive and facultative heterochromatin, 7. Regulation of Chromatin Structure, 8. Organisation of DNA- Prokaryotes, Viruses, Eukaryotes 9. DNA topology- Linking number and Topoisomerases 10. Eukaryotic Transposable Elements

**Week 2**

1. RNA Structure, Organelle DNA- Mitochondria and chloroplast DNA, 2. General Principles of DNA Replication, 3. Enzymes involved in DNA Replication, 4. Proteins involved in initiation, elongation and termination of polypeptides, 5. Replication of Linear Double Stranded DNA, 6. Various Models of DNA Replication, 7. DNA Damage Replication Errors and their repair

**Week 3**

1. Transcription in Eukaryotes, 2. Transcription in Prokaryotes, 3. Principles of Transcriptional Regulation, 4. Transcription regulation in Eukaryotes, 5. Spliceosome machinery and splicing pathways, 6. Gene silencing, Riboswitches, Regulatory RNA, RNA interference, mi RNA and siRNA & X-inactivation, 7. Signal transduction and control of transcriptional regulator, 8. Translation and various steps in protein synthesis, 9. Charging of tRNA, aminoacyl tRNA synthetases, Assembly line of polypeptide synthesis, 10. Translation dependent regulation of mRNA and protein stability, 11. Fidelity of translation, inhibitors of protein synthesis and protein targeting

**Week 4**

1. Agarose Gel Electrophoresis, 2. DNA isolation from E coli (Theory), 3. DNA isolation from E coli (Practical), 4. Estimation of RNA by Orcinol Method, 5. Estimation of DNA by DPA method, 6. SDS-PAGE Practical

**ABOUT INSTRUCTOR**

- M.Sc (1988), M. Phil and Ph. D Biochemistry from University of Kashmir, Srinagar, J&K.
- Ex-Director, Centre of Research for Development (CORD) & Head, Department of Environmental Science, University of Kashmir, Srinagar since 2013 J&K.
- 23 years of teaching experience in the field of Protein biochemistry/ molecular biology/ Enzymology.



# Social Science Courses

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**DR. ANUPAMA**

Professor, Department of Economics,  
Punjabi University, Patiala.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2

**COURSE DURATION** : 6 weeks (07/09/2018 & 22/10/2018)

**EXAM DATE** : 06-11-2018 (Tentative)

**NO OF CREDITS** : 2

**OBJECTIVE OF COURSE**

- To acquaint the students with the profile of world population.
- To discuss in detail about the population distribution among different parts of the world.
- To throw light on major issues like family planning, aging and health care.
- To know the condition of labour force and labour markets across the world.

**LEARNING OUTCOME**

The modules of this course aim at answering the following questions in a comprehensive manner.

What are the main features of world population?

How population is distributed in developed and developing countries?

What are the main trends and conflicts in world population?

What are the major components of African population?

What is the mechanism of labour market in Asia and Africa?

**COURSE PLAN****Week I**

Profile of World Population

World Population and Demographic Dynamics

Population Distribution in Developed World

Population Distribution in The Developing World

**Week II**

Population Trends in the Developed World

Population Trends in the Developing World

Demographic Transition and Conflicts

Age Structure in Developed and Developing Countries

**Week III**

Trends in Life Expectancy

Labour Force in United States: Trends

Sexual and Reproductive Health in Africa

Family Planning in Africa

**Week IV**

Population Aging in America

Population Trends and Challenges in China

Aging in China

International Experiences of Demographic Dividend

**Week V**

Demographic Dividend in Africa

Labour Markets in Africa

Job Quality and Labour Market in Africa

**Week VI**

Dimension of Labour Market Inequalities in Africa

Labour Markets and Coping Mechanisms in Africa

Demographic Profile of Asia

**ABOUT INSTRUCTOR**

- Working as professor in the Department of Economics, Punjabi University, Patiala.
- Delivered more than 30 educational videos in the subject of population studies for UGC and MHRD sponsored higher educational channels.
- Attended a great number of national and international conferences and seminars.





**DR. ANUPAMA**

Professor, Department of Economics,  
Punjabi University, Patiala.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2

**COURSE DURATION** : 6 weeks (07/09/2018 & 22/10/2018)

**EXAM DATE** : 06-11-2018 (Tentative)

**NO OF CREDITS** : 2

**OBJECTIVE OF COURSE**

- To understand the relationship between population, environment and development.
- To discuss the existing population policies across the world.
- To address all the major environmental and climate related issues.
- To know the role of gender related issues in relation to population, environment and development.

**LEARNING OUTCOME**

After going through this course students shall be able to understand that how with globalization, and new and emerging technologies and modes of production and consumption, the relationships among population, environment and development have become issues of heightened concern for governments, the international community and the average citizen. Environmental stress is a matter not just of population change, but also of how and what people produce and consume now and in the future.

**COURSE PLAN****Week I**

Population and Issues of Aged population  
Population and Issues Concerning Youth  
Population Policies in Developed Countries  
Population Policies in Developing Countries

**Week II**

Concepts of Population Dynamics and Climate Change Adaptation  
Population and Climate Change and Understanding Impacts of Climate Change  
Population and Land Degradation  
Population and Water Scarcity

**Week III**

Population Growth and Bio-Diversity  
Climate-related Disasters and Displacement  
Population, Climate and Health  
Population Dynamics and Policies in the Context of Global Climate Change

**Week IV**

Demography of Adaptation to Climate Change  
Population Dynamics and Climate Change Adaptation Policy  
Population, Gender and Climate Change  
Women and Climate Change

**Week V**

Youth and Climate Change  
Children and Climate Change  
Children, Environment and Health  
Population and Reproductive Health in National Adaptation Programmes of Action (NAPAs) for Climate Change

**Week VI**

Climate Change and Gender Equality and Adaptation Plans  
Gender Mainstreaming and Water Resource Management  
Gender Dimensions of Environmental Policies and Programs  
Gender, Environment and Inclusive Growth

**ABOUT INSTRUCTOR**

- Course Coordinator of this course.
- One of the respected names in the field of population studies.
- Working as professor in the department of economics, Punjabi university, Patiala.
- Delivered more than 30 educational videos in the subject of population studies for UGC and MHRD sponsored higher educational channels.
- She has attended a great number of national and international conferences and seminars.





## DR. GURINDER KAUR

Professor, Department of Geography,  
Punjabi University, Patiala.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2

**COURSE DURATION** : 6 weeks (07/09/2018 & 22/10/2018)

**EXAM DATE** : 06-11-2018 (Tentative)

**NO OF CREDITS** : 2

### OBJECTIVE OF COURSE

- To acquaint the students with the different Concepts and Theories of Population proposed by different experts.
- To enable the students to understand that population limitation can facilitate the development of a higher quality of life in the nation.
- To give accurate information to the students about the effect of changes in family size and in national population on the individual.
- To understand a broad definition of health, Human Rights, Religion, Mortality and food security.



### LEARNING OUTCOME

After going through this course students shall be able to know about the different Concept and Theories of Population. After the accomplishment of the course –

1. Students will be able to convey about the concepts of Population.
2. Learners will understand meaning and scope of demography.
3. Students will have an appraisal the different theories of population i.e. Malthusian, Optimum, Leibenstein etc.
4. They will come to know the role of Mortality, Migration, Fertility, Religion, Climate, Bio Diversity, Climate and other perspectives of population.
5. Learners will understand the Relationship between problems and resources of population.

### COURSE PLAN

#### Week I

Meaning and Scope of Demography  
Malthusian Theory of Population.  
Optimum Theory of Population  
Leibenstein's Theory of Population

#### Week II

Theory of Demographic Transition  
Population Growth in Developed World  
Population Growth in the Developing World  
Population Change and Demographic Dynamics

#### Week III

Population Explosion and Population Implosion  
Components of Population Change: Fertility  
Components of Population Change: Mortality  
Components of Population Change: Migration

#### Week IV

Causes and Consequences of Changes in Population Growth  
Causes and Consequences of Changes in Fertility  
Causes and Consequences of Changes in Mortality  
The Concept of Population Control

#### Week V

Techniques of Population Control  
Religion and Population Control  
Morality and Population Control  
Human Rights and Population

#### Week VI

Reproductive Rights and Population  
Right to Abortion: Different Perspectives  
Population and Food Security  
Population, Gender and Climate Change

### ABOUT INSTRUCTOR

- Course Coordinator of this course.
- One of the respected names in the field of population studies and geography.
- Working as professor in the department of geography, Punjabi university, Patiala.
- Delivered more than 20 educational videos in the subject of population studies for UGC and MHRD sponsored higher educational channels.
- Attended a great number of national and international conferences and seminars.



**DR. GURINDER KAUR**

Professor, Department of Geography,  
Punjabi University, Patiala.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**PRE-REQUISITES** : 10+2

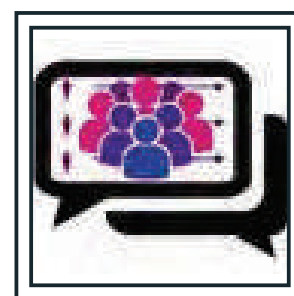
**COURSE DURATION** : 6 weeks (07/09/2018 & 22/10/2018)

**EXAM DATE** : 16/11/2018 (Tentative)

**NO OF CREDITS** : 2

**OBJECTIVE OF COURSE**

- To discuss the basic statistics for demographic analysis
- To acquaint the students with all the essential statistical tools and techniques and methods of data collection.
- To throw light on the conceptual models and practical aspects of different research designs.
- To understand the importance of all the steps in a research process and their relevance and implication in population studies

**LEARNING OUTCOME**

After going through this course students shall be able to know about the different research methods in population studies. After the accomplishment of the course -

1. Students will be able to comprehend basic mathematics applied in population research.
2. Learners will understand different measures of statistics used in population studies.
3. Students will have a good knowledge about conceptual models of population research.
4. They will come to know about tools and techniques applied in population research.
5. Learners will understand how to produce effective results from population data by using various methods of research.

**COURSE PLAN****Week I**

Basic Mathematics for Demographic Analysis  
Basic Statistics for Demographic Analysis  
Calculation of Indicators of Population Growth and Distribution  
Measures of Statistical Averages

**Week II**

Measures of Variance  
Measures of Correlation  
Measures of Regression  
Concepts and Methods of Population Analysis

**Week III**

Methods of Quantitative Data Collection  
Population Age-Structure and Growth  
Population Projections  
Understanding and Interpretation of Demographic Data

**Week IV**

Methods of Population Analysis  
Methods and Techniques of Population Research  
Conceptual Models for Effective Designing and Planning of Population Research  
Conceptual Models for Effective Conduct of Population Research

**Week V**

Practical Aspects of Population Research Design  
Effective Steps in Conducting Population Research  
Integration of Concepts and Project Development  
Research Skills: Research Design and Literature Review

**Week VI**

Research Skills: Plagiarism and Research Ethics  
Sampling and Census Methods for Population Research  
Questionnaire and Schedules for Population Research  
Population Data Collection and Analysis

**ABOUT INSTRUCTOR**

- Course Coordinator of this course.
- One of the respected names in the field of population studies and geography.
- Working as professor in the department of geography, Punjabi university, Patiala.
- Delivered more than 20 educational videos in the subject of population studies for UGC and MHRD sponsored higher educational channels.
- Attended a great number of national and international conferences and seminars.





## PROF. S. JIBONKUMAR SINGH

Professor, Department of Anthropology,  
Manipur University

**TYPE OF COURSE** : Certificate **COURSE DURATION** : 12 weeks (02/07/2018 to 22/09/2018)  
**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School **EXAM DATE** : 13/12/2018  
 and also Minimum 10 + 2 any stream **NO OF CREDITS** : 4  
 with sufficiently good academic record.

**PRE-REQUISITES** : Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course

### OBJECTIVE OF COURSE

- To understand the basic knowledge of anthropology
- its aims & scope of biological anthropology, socio-cultural anthropology, prehistoric culture and language

### LEARNING OUTCOME

After the completion of the course, students will be able to understand the basic knowledge of anthropology, its aims & scope of biological anthropology, socio-cultural anthropology, prehistoric culture and language and also should also be able to develop research questions and design research proposal. The participants of the present course will also help in understanding the applications of anthropology in different aspects of human society.

### COURSE PLAN

#### Week 01:

1. Meaning and Scope of Anthropology, 2. History of Anthropology, 3. Growth of Anthropology, 4. Modern Trends of Anthropology

#### Week 02:

1. Cultural Evolution: Broad Outline of Prehistoric Cultures, 2. General Studies on Material Culture of Prehistoric and Preliterate People, 3. Studies on habitat and Economy of Prehistoric/Preliterate Societies

#### Week 03:

1. Branches of Anthropology, 2. General Scope & Uses of Physical/Biological Anthropology, 3. General Scope and use of Social-Cultural Anthropology, 4. Fundamentals in Archaeological Anthropology: Chronology

#### Week 04:

1. Speech, Language and Dialect, 2. Sociolinguistics, 3. Semantics and Lexicon, 4. Morphemics and Syntax, 5. Phonetics and Phonemics

#### Week 05:

1. Relationship with Life Sciences, Earth Sciences, Medical Sciences, Environmental Sciences, 2. Relationship with History, Sociology, Economics, Social Psychology and Political Sciences, 3. Relationship with Social Sciences, 4. Relationship with Humanities, Literature

#### Week 06:

1. Research Methods: Tools and Techniques, 2. Fieldwork Tradition in Anthropology, Pilot Survey, 3. Participant observation, schedule and questionnaire and case study, 4. Interview and genealogical Method of data collection

### ABOUT INSTRUCTOR

- Teaching experience of 30 years (8 eight years-undergraduate, 22 years-postgraduate).
- Research experience of 23 years research experience,
- presently guiding 6 (six) research scholars, produced 8 (eight) Ph.D. Degrees,
- Completed 4 (four) research projects and 2(two) continuing.
- Published numerous articles and books and attended many international and National conferences.

#### Week 07:

1. Statistics –Universe and Sample: Random and non-random sampling

2. Raw and array data; Variable (quantitative and qualitative, discrete and continuous)

3. Frequency distribution (Mean, Median and Mode)

4. Measures of Dispersion (Range, standard deviation, standard error)

5. Graphic presentation (histogram, polygon and pie chart)

#### Week 08:

1. Introduction to Report writing, 2. Steps of report writing, 3. Structure of a report, 4. Footnote, reference, bibliography and appendix

#### Week 09:

1. Concept and scope of Applied Anthropology, 2. Concept and Scope of Action Anthropology, 3. Concept and Scope of Development Anthropology

#### Week 10:

1. Anthropometry in the field work, 2. General account of the field site  
3. Census Survey, 4. Material culture of the Tangkhul (Based on the Anthropological field work)

#### Week 11:

Interactions on topics discussed on 1st to 5th week.

#### Week 12:

Interactions on topics discussed on 6th to 10th week.



**PROF. S. JIBONKUMAR SINGH**

Professor, Department of Anthropology, Manipur University

**TYPE OF COURSE** : Certificate Course  
**COURSE DURATION** : 14 weeks (24/09/2018 to 27/12/2018)  
**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School  
**EXAM DATE** : 15/02/2019 (tentative)  
**NO OF CREDITS** : 5

**PRE-REQUISITES** : Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course

**OBJECTIVE OF COURSE**

- To understand the basic knowledge of physical anthropology,
- its aims, scope of physical anthropology and its relationship with allied disciplines

**LEARNING OUTCOME**

- After studying this course, students will be able to understand the basic knowledge of physical anthropology, its aims, scope of physical anthropology and its relationship with allied disciplines.
- Students will be able to answer the different theories of evolution and they should understand how human evolution occurred; what are the relationship between non-human primates and human.
- Students will also be able to explain why human variation occurred and what could be the possible associated factors for it; division of human into different groups on the basis of variation; and classification of human into different categories biologically.
- Moreover, after the completion of the course students will be able to take various somatometric measurements and somatoscopic observation on human subjects.

**COURSE PLAN****Week 01:**

1. Definition and Scope of Physical Anthropology; 2. Relationship of Physical Anthropology with other Branches of Anthropology; 3. Relationship of Physical Anthropology with other fields - Biology, Demography, Ecology and Forensic Sciences

**Week 02:**

1. Theories of Special Creation and Catastrophism, 2. Organic Evolution: Lamarckism, Darwinism, 3. Neo-Lamarckism and Neo-Darwinism

**Week 03:**

1. Evolution of Man, 2. Ramapithecus (*Ramapithecus bevirstris*), 3. Australopithecus Africanus, 4. *Homo erectus* (*Pithecanthropus erectus*)

**Week 04:**

1. Human Skeleton: Classification and Anatomical Features, 2. Skeletal Changes due to assumption of erect posture – Skull, Vertebral Column, 3. Skeletal Changes due to assumption of erect posture – Pelvic Girdle and Foot

**Week 05:**

1. Classification of Order Primates; 2. Salient Characteristics of the Order Primates; 3. Characters and Distribution of Anthropoid Apes

**Week 06:**

1. Human Growth and Development; 2. Different stages of life and Growth and Development; 3. Methods in growth studies; 4. Factors Affecting growth

**Week 07:**

1. Human genetics and its history and development; 2. Theories of inheritance: Man as an object of Genetical study, Laws of Heredity Mendel's principles; 3. Human Chromosome Complement; 4. Cell Division: Mitotic and Meiosis; 5. Simple Single Factor inheritance in Man; 6. Multiple allelism and polygenic inheritance

**ABOUT INSTRUCTOR**

- Teaching experience of 30 years (8 eight years-undergraduate, 22 years-postgraduate).
- Research experience of 23 years research experience,
- Presently guiding 6 (six) research scholars, produced 8 (eight) Ph.D. Degrees,
- Completed 4 (four) research projects and 2 (two) continuing.
- Published numerous articles and books and attended many international and National conferences.

**Week 08:**

1. Concept of Race and the UNESCO Statement of Race; 2. Racial Criteria (Stature, Skin Colour, Hair, Eye, Head, Nose and Face); 3. Major racial groups of the world and their characteristics; 4. Human variation: ABO, Rh and dermatoglyphics

**Week 09:**

1. Identification of Instruments: Spreading Caliper, Spreading Caliper (Blunt & Pointed) Anthropometer, 2. Identification of Instruments: Rod Compass, Tubular Craniophore, Cubic Craniophore & Diagraph

**Week 10:**

1. Anthropometry, 2. Cephalometry, 3. Anthropometric Indices: Cephalic Index, Total Facial Index and Body Mass Index, 4. Somatoscopic observation

**Week 11:**

1. Drawing & Description of Skull; 2. Drawing & Description of Girdle Bones: Clavicle, Scapula, Pelvic and Girdle; 3. Drawing & Description of Limb Bones: Humerus, Radius, Ulna, Femur, Tibia & Fibula

**Week 12:**

1. Osteometric measurements on Scapula, 2. Osteometric measurements on Humerus, 3. Osteometric measurements on Femur

**Week 13:**

1. Craniometry, 2. Direct Linear Measurements: Maximum Cranial Length, Maximum Cranial Breadth, Least frontal Breadth, 3. Direct Linear Measurements: Nasal Height, Nasal Breadth, Bizygomatic Distance, Bigonial Distance Length of Foramen Magnum, Cranial Index, Nasal Index, 4. Angular Measurements: Metopic angle and nasal profile angle.

**Week 14:**

1. Finger Pattern Types (Henry Classification), total Ridge Count, 2. Pattern Intensity index, Dankmeijer index and Furuhata's index, Mainline formula and Mainlikne index. 3. Serology: ABO and Rh(D) blood group system; 4. Human Physiology: Pulse rate and blood pressure





## DR. TH. RABIKANTA SINGH

Associate Professor, P.G. Department of Anthropology, D. M. College of Science,  
D. M. University, Imphal

**TYPE OF COURSE** : Certificate Course  
**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School  
**COURSE DURATION** : 12 weeks (02/07/2018 to 22/09/2018)  
**EXAM DATE** : 14/12/2018 (tentative)  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course

### OBJECTIVE OF COURSE

- It is concerned with culture which makes man unique among living creatures through learned behaviour per se, whether it belongs to the primitive men or city dwellers.
- to acquire a thorough knowledge of socio-cultural aspects of human and changes occurring in society and culture.
- to understand the ethnographic works with some examples.
- to know anthropology in Indian context

### LEARNING OUTCOME

After learning the course the students will be able to understand-

- the concept and scope of social and cultural anthropology.
- the intra and inter relationship of social and cultural sub-discipline of Anthropology with the other sub-disciplines of the subject as well as with other allied sciences.

### COURSE PLAN

#### Week 01:

1. Concept and Scope of Social Culture Anthropology, 2. Social & Cultural Anthropology: Relationship of Social & Cultural Anthropology with History, Economics & Psychology, 3. Relationship of Social and Cultural Anthropology with Political Science, Linguistics and Sociology

#### Week 02:

1. Theories of Social & Cultural Anthropology, 2. Evolutionism, 3. Neo-evolutionism, 4. Diffusionism

#### Week 03:

1. Concept of Society, 2. Social groups- Primary, Secondary and Tertiary, 3. Communities- Rural and Urban, 4. Society and Culture

#### Week 04:

1. Kinship: Types of Kinship, Affinal and Consanguinal, 2. Kin group – Lineage, Clan, Phatry and Moiety, 3. Kinship Terminology and its usages

#### Week 05:

1. Family: Definition, Types of family, 2. Functions of Family, 3. Marriage: Definition and forms of Marriage, 4. Preferential and Prescriptive Marriage  
 5. Ways of acquiring mates, Hypergamy and Hypogamy

#### Week 06:

1. Polity- State and Stateless societies, forms of Government and Law, 2. Economy- Definition, Kula and Potlach

#### Week 07:

1. Religion: Definition and Characteristics, 2. Forms of primitive Religion, 3. Rites and ritual: Rites De Passage, 4. Specialist- Shaman, Priest, Divination

#### Week 08:

1. Social Change: Meaning, Factors of Social Change, 2. Theories of Social Change, 3. Assimilation and Acculturation , 4. Enculturation/Socialization

#### Week 09:

1. Ethnographic Account of Nuer, 2. The Purum social organization, 3. The Material Culture of the Onges, 4. Ethnographic Accounts of the Chin, 5. The Khasi Social Organisation

#### Week 10:

1. Indian Anthropology – growth and development, 2. Profile of Indian Tribes  
 3. Land Alienation, Shifting Cultivation, Constitutional Safeguards

#### Week 11:

1. Concepts used in civilization studies in India: Sanskritization, Parochialization, Universalization and Globalization, 2. Concepts used in Indian Anthropology: sacred complex, great and little tradition, caste tribe continuum, 3. Indian Caste System

#### Week 12:

Interactions with the students

### ABOUT INSTRUCTOR

- Teaching experience of 22 years in UG and 11 years in PG classes.
- Guided three Ph. D. scholars under two universities and supervised two scholars under Tribal Research Institute, Govt. of Manipur.
- Completed various projects namely- Tribal Profile of Manipur under Directorate of Tribal and Backward Classes, Govt. of Manipur. 1998.
- Published a book entitled Pottery in Manipur in 1999 and also a Co-writer for text book in Anthropology for XII standard under Council of Higher Secondary, Manipur.
- An editorial member of Frontier Anthropology – an annual journal of Anthropological Society of Manipur.





## DR. ROOPA RAVIKUMAR

Associate Professor, Department of Social Sciences,  
Lady Doak College, Madurai

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 7 weeks (09/07/2018 to 24/08/2018)

**EXAM DATE** : 19/11/2018 (tentative)

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Should have completed higher secondary.

### OBJECTIVE OF COURSE

- To have a basic idea on the geographical distribution of tribal population in India.
- To understand and explore the tribal culture.
- To critically analyze the problems faced by the tribal population.
- To create interest in students to do research on tribal issues.

### LEARNING OUTCOME

At the end of the course the student will be able to gain awareness of the various classification of tribal communities and Be familiar with the problems of tribes and enable them to research on various tribal issues.



### COURSE PLAN

#### Week 01

1. Need for the study of tribal society
2. Nature and characteristics of tribal society
3. Tribes and castes in India
4. Formation of Tribal Status

#### Week 02

5. Ethnic and cultural diversity
6. Classification of tribal people- Nomads, Pastoral and Artisans
7. Classification of tribal people – shifting cultivators, peasants and agriculturists
8. Classification of tribal people- food gatherers and hunters
9. Tribes of India- Demographic Profile 1 and Profile II

#### Week 03

10. Characteristics features of tribal society- kinship, marriage and family
11. Tribes of India/status of women, marriage and education
12. Health and life expectancy of tribal people

#### Week 04

13. Tribal language
14. Religious beliefs, practices and cultural traditions
15. Poverty and illiteracy

#### Week 05

16. Indebtedness, land alienation, agrarian interests
17. Exploitations and other problems
18. Hinduisation and Sanskritisation

#### Week 06

19. The impact of colonial rule in tribal society
20. Colonial
21. Post-Independence scenario and tribal development

#### Week 07

22. Post independent period
23. Tribal communities of state/ religion
24. Tribal integration and identity

### ABOUT INSTRUCTOR

- A passionate and committed professor of Sociology with
- 25 years of teaching experience.
- Expert in dealing with vulnerable communities like the Tribals, transgender and the elderly people.
- Attended many international and National conferences and seminars.





## DR. HOMEN THANGJAM

Dept. of Political Science & Human Rights, Indira Gandhi National Tribal University  
Regional Campus Manipur University

**TYPE OF COURSE** : Certificate Course  
**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School  
**COURSE DURATION** : 12 weeks (24/09/2018 to 21/12/2018)  
**EXAM DATE** : 07/03/2019 (Tentative)  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course

### OBJECTIVE OF COURSE

- This is a multi-disciplinary subject with the sole objective of improving the agricultural practices as well as the well-being of the farmers in the rural areas.
- To understand complex social structures, culture and value system of the rural life, while at the same time the person engaged as an extension worker has to be well equipped with latest developments in the field of agriculture
- Finally transact the suitable knowledge/technology in the most effective manner to the rural stakeholders.

### LEARNING OUTCOME

1. After studying this course, students will be able to understand the basic knowledge of agricultural extension, fundamentals of rural sociology and educational psychology, fundamentals of psychology and educational psychology and extension methodology for transfer of agricultural technology.
2. Students will be able to understand the reality of the Indian rural societies, social structures, culture and social values of the rural societies, and how these affect agricultural practices in India.
3. Students will be exposed to the importance of psychology and educational psychology in agricultural extension specially the role of intelligence, personality, motivation and principles of learning.
4. Students will be equipped with methodologies of extension for transfer of agricultural technology to the farmers. As communication plays an important role in the transfer of agricultural technology, special focus is given to understanding the concept of communication, its types and how to develop individual contact methods.
5. As Practical/field visit is the added in the course. Students will be given the opportunity to apply theoretical knowledge learnt in the classes to the real agricultural life of India.
6. After the completion of the course, students will be have the knowledge of agricultural extension and prepared to be an extension worker. The knowledge and skill so acquired during the course can be meaningfully utilised to improve not only the agricultural practices in India but also uplift the living standard of the people living in rural India.

### COURSE PLAN

#### Week01:

1. Sociology and Rural sociology, extension education, agricultural extension – meaning and definitions. 2. Importance of rural sociology in agricultural extension and their interrelationship. 3. Characteristics of Indian rural society – differences and relationships between rural and urban societies. 4. Social group(s) – classification – formation and organization of groups and role of social groups in agricultural extension 5. Social stratification – meaning – forms – class system and caste system.

#### Week 02:

1. Culture and different cultural concepts and their role in agricultural extension. 2. Social values, social control and attitudes – types and their role in agricultural extension 3. Leadership – meaning – classification of leaders – roles of a leader and different methods in selection of a leader. 4. Training of leaders – lay and professional leaders 5. Leadership and agents of agricultural extension

#### Week 03:

1. Psychology and Educational Psychology – meaning – scope and importance. 2. Intelligence – meaning – types – factors and importance in agricultural extension. 3. Personality – meaning – types – factors and importance in agricultural extension. 4. Perception, emotions and frustration – meaning – types – factors and importance in agricultural extension.

#### Week 04:

1. Motivation – meaning – types of motives – theories of motivation and importance of motivation in agricultural extension. 2. Teaching, learning, learning experience and learning situation – meaning and definition – elements of learning situation and its characteristics. 3. Principles of learning and their implications in teaching – steps in extension teaching

#### Week 05:

1. Communication – definition, models of communication process, 2. Elements of communication and their characteristics, 3. Types of communication - Verbal and non-verbal; functions, 4. Some concepts relating to communication

#### Week 06:

1. Extension teaching method – definition – functions and classification, 2. Individual contact methods: Farm and home visit, 3 Group contact methods: Method demonstration 4. Group discussion – meaning – purposes – procedure

#### Week 07:

1. Mass contact methods: Campaign – meaning – objectives – procedure advantages and limitations, 2. Radio – meaning – purposes – advantages and limitations, 3. Information Sources: Internet-Meaning-Purposes-Benefits and Limitations

#### Week 08:

1. Call centres – Farmers Call Centre in Manipur and Kisan Call Centres, 2. Adoption - Diffusion – Innovation, 3. Innovation decision process – meaning – stages – concepts of dissonance and rejection, 4. Factors influencing adoption process – social, personal and situational, 5. Farmers' Training Centre (FTC) – objectives and trainings organized

#### Week 09:

1. Visit to a village to list out the taboos, folkways, rituals and social values in the Village. 2. Administering psychological tests by students to assess the personality types of human beings. 3. Conducting role play technique by the students to exhibit different leadership styles.

#### Week 10:

1. Exercise to create a learning situation under village conditions for a specific teaching activity. 2. Exercise on training need assessment of farmers of a village. 3. Visit to a village for conducting a training programme. 4. Exercise on identification of potential agricultural technologies for enterprises.

#### Week 11:

Interactions on topics discussed on 1st to 5th week

#### Week 12:

Interactions on topics discussed on 6th to 10th week.

### ABOUT INSTRUCTOR

- Completed his Ph.D. from Jawaharlal Nehru University, New Delhi
- JRF/ NET qualified
- 10 years of teaching experience
- Project Manager of the project entitled Strategic Analysis from 2006-2009.
- Published many articles and edited many journals.







**DR. B. NALINI**

Professor Emeritus UGC, ICSSR Senior Fellow, Dept. of Sociology  
Madurai Kamaraj University

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 17 weeks (09/07/2018 to 31/10/2018)

**EXAM DATE** : 05/12/2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : ·Should have completed higher secondary. Should possess a basic thirst to know the functioning of society, have interest in gaining knowledge of social life.

### OBJECTIVE OF COURSE

- To enable the students to understand the society and social relationships.
- To help the learners to acquire knowledge of human personality and social expectations.
- To enable the learners to equip themselves for Civil service exams.

### LEARNING OUTCOME

- ·On completion of the course the learner will get a clear picture of the social system in which they live and could develop a better social relationship.
- The students will realize the importance of each and every social unit, custom and institutions and will try to adhere to the social expectations.



### COURSE PLAN

#### Week 01 Unit -1 Introduction to sociology

1. Definitions, subject matter and important concepts, 2. Sociology as a Science and its relation to other social sciences-I, 3. Sociology as a Science and its relation to other Social Sciences-II

#### Week 02 Unit -2 - Approaches

4. Sociological methods and approaches-Part I, 5. Sociological methods and approaches-Part II, 6. The role of sociologists in Society

#### Week 03 Unit-3 Culture & Civilization

7. Definition of culture and civilization, 8. Concepts relating to culture, 9. Concepts relating to culture and civilization

#### Week 04 Unit-4 Social Groups & Process

10. Social Groups-I, 11. Social Groups-II, 12. Social Process-I, 13. Social Process-II

#### Week 05 Unit5- Social Institutions-Part-1

14. Family as social institution, 15. Marriage as social institution, 16. Kinship as social institution

#### Week 06 Unit6- Social Institutions =Part 2

17. Religion as social institution, 18. Political system as social institution, 19. Economic and educationa system as social institution

#### Week 07 Unit7- Sociology of family

20. Sociology of Family, 21. Definition & types of family-nuclear family  
22. Definition and types of family-joint Matrilineal and Matrilineal, 23. Family structure and composition

#### Week 08 Unit8- Sociology of Kinship-Basics

24. Sociology of Kinship, 25. Kinship structure and function, 26. Nature and significance of Kinship

#### Week 09 Unit9- Rules of Marriage

27. Rules of Marriage- endogamy, exogamy and others, 28. Preferential marriages, 29. Taboos in Marriages

#### Week 10 Unit 10 Types of Marriage

30. Types of marriage (monogamy, polygamy), 31. Types of marriage (levirate, sororate), 32. Types of marriage (Hypo gamy, hyper gamy)

#### Week 11 Unit 11- Socialization - Definitions and stages

33. Socialization – Definition and types, 34. Stages of socialization, 35. Development of Self

#### Week 12 Unit 12 Socialization Agencies & Development

36. Theories of socialization, 37. Agencies of socialization-I, 38. Agencies of Socialization – II

#### Week 13 Unit 13 Social stratification- Definition & Theories

39. Social Stratification- Definition & Characteristics, 40. Theories of Social Stratification-I, 41. Theories of Social Stratification-II, 42. Caste & class as a form of social stratification

#### Week 14 Unit-14 Social control

43. Social control, 44. Agencies of social control, 45. Social control-current scenario-I, 46. Social control – current scenario-II

#### Week 15 Unit 15 Social change - Basics

47. Social change- Introduction, 48. Forms of social change, 49. Factors stimulating social change

#### Week 16 Unit 16 Social Change

50. Theories of social change, 51. Westernization & Globalization

#### Week 17

52. Social change in India

### ABOUT INSTRUCTOR

- Teaching Experience of 30 years
- Specialised in Sociology of Health, Sociology of Modernisation, Family & Kinship.
- Published 5 books and numerous articles in National and International journals.
- Visited many countries to attend conferences and workshops.
- Organised many conferences and workshops.



**DR. N. PRAMOD SINGH**

Associate Professor, L.M.S Law College, Imphal Manipur

**TYPE OF COURSE** : Certificate Course**COURSE DURATION** : 12 weeks (24/09/2018 to 13/12/2018)**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School**EXAM DATE** : 8/03/2019 (Tentative)**NO OF CREDITS** : 4**PRE-REQUISITES** : Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course**OBJECTIVE OF COURSE**

To understand the importance of human rights and humanitarian rules, especially for safeguarding the basic rights and freedoms of individuals in the conflict situation, The national humanitarian rules and agencies along with their role and functions have been cited comprehensively in this course

**LEARNING OUTCOME**

- Familiarize with the relationship of Human Rights with the U.N.
- Understand the background and significance of Universal Declaration of Human Rights.
- Familiarize with the various International Covenants.
- Explore the specialized Human Rights Instruments of U.N.
- Understand the basic Principle of International Humanitarian Law
- Understand the Role of UN in solving the Problems of Refugees.

**COURSE PLAN****Week 01:**

1. U.N. Human Rights under the UN Charter, 2. U.N. General Assembly  
3. Economic and Social Council (ECOSOC), 4. U.N. Human Rights Commission, 5. U.N. Human Rights Council, 6. U.N. Trusteeship Council, 7. U.N. Special Rapporteurs, 8. Universal Periodic Review

**Week 02:**

1. Background for adoption of UDHR, 2. Significance of UDHR

**Week 03:**

1. Background for adoption of ICCPR, 2. Contents of ICCPR, 3. Implementation mechanism and procedure under ICCPR, 4. Significance of reporting procedure under ICCPR

**Week 04:**

1. Background for adopting the International Covenant on Economic, Social and Cultural Rights (ICESCR), 2. Contents of ICESCR, 3. Implementation mechanisms and procedure under ICESCR, 4. Significance of reporting procedure under ICESCR

**Week 05:**

1. Convention on prevention and punishment of crimes and genocide, 1951, 2. International conventions on the Elimination of all forms of Racial Discrimination, 1969, 3. Convention on the Elimination of all forms of Discrimination Against Women, 1979, 4. Convention on the Rights of the Child, 1989.

**Week 06:**

1. Historical background of evolution of International Humanitarian Law (a) Temporary Tribunal, ICTY, ICTR, Rome Treaty, ICC (b) Customary International Humanitarian Law, 2. Adoption of old Geneva Conventions on International Humanitarian Law (1864), 3. Adoption of Hague Convention on International Humanitarian Law (1899 & 1907), 4. Adoption of UN Convention on International Humanitarian Law (1949), 5. Adoption of Geneva protocols on International Humanitarian Law (1977)

**Week 07:**

1. Protection of Sick and wounded Soldier during war and armed conflict. 2. Protection of unarmed civilian and their objects, 3. Prohibition of use of weapons and methods of warfare. 4. Protection of prisoners of war and civilians under custody. 5. Role of Humanitarian agencies under International Humanitarian Law (ICRC)

**Week 08:**

1. Background for enactment of Geneva Convention Act, 1960, 2. Basic principles of Act of 1960, 3. Evaluation of the activities of the National Red Cross Society and other national humanitarian agencies.

**Week 09:**

1. Meaning and definition of displaced persons, 2. Issues of displaced persons and their protection under International Law.

**Week 10:**

1. Refugee problems and UN, 2. Role of the UNHCR for protection of refugee

**Week 11:**

Interactions on topics discussed on 1st to 5th week

**Week 12:**

Interactions on topics discussed on 6th to 10th week.

**ABOUT INSTRUCTOR**

- Teaching experience of 20 years. His specialized in Jurisprudence, Constitutional Law, Adm. Law, Human Rights and International Humanitarian Law.
- Actively involved in disseminating Human Rights Education in Various part of India.
- Published 3 books (Global Justice & Rule of Law, Human Rights In Manipur, Constitutional Governance and Legal Institution) and has contributed many book chapters and research Articles
- Supervised 3 PhD Research Scholars under his guidance.



**DR. N. PRAMOD SINGH**

Associate Professor, L.M.S Law College, Imphal Manipur

**TYPE OF COURSE** : Certificate Course  
**INTENDED AUDIENCE** : UG/PG/Diploma/Certificate/School  
**COURSE DURATION** : 12 weeks (02/07/2018 to 22/09/2018)  
**EXAM DATE** : 12/12/2018 (Tentative)  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : Students who have cleared/passed XII standard (both Science and Arts streams) are eligible to join the course

**OBJECTIVE OF COURSE**

- This is an introduction to the concept of Human Rights in general with reference to human rights in India especially in North-eastern India.
- To understand the relevant provisions of human rights those are enshrined in the constitution. As such, the preamble to the constitution promises to secure to all the people of India- right to life, liberty, belief, faith, worship, equality of status and opportunity among others.
- The course deals with the root causes of violations of human rights of individuals, especially with reference to North east India.

**LEARNING OUTCOME**

After studying this course, the students/learners will be able to:

- Familiarize with the concept of Human Rights in India.
- Understand the Constitutional Provisions of Human Rights.
- Familiarize with the statutory provisions of Human Rights and role of other statutory commissions.
- Explore the causes of Human Rights Violation in North East India.
- Understand the Human rights of women and children.
- Understand the Role of Human Rights NGOs in North East India

**COURSE PLAN****Week 01:**

1. Human Rights movement during Indian freedom struggle. 2. Civil and Political Rights Movements Social, economic and educational Rights Movements

**Week 02:**

1. Rights to equality (Article 14-18), 2. Right to freedom (Article 19-22), 3. Right against exploitation (Article 23-24), 4. Right to freedom of religion (Article 25-28). 5. Cultural and educational right (Article 29-30). 6. Right to Constitutional Remedies (Article 32-35)

**Week 03:**

1. Nature and scope of Directive Principles of State Policy. 2. Justiciability of Economic and Social Cultural rights. 3. Relations between fundamental rights and Directive Principles of State Policy. 4. National and International obligation of India under Directive Principles of State policy

**Week 04:**

1. Background for Protection of Human Rights Act, 1993. 2. Human Rights Court under Protection of Human Rights Act, 1993. 3. Powers and Functions of National Human Rights Commission. 4. Powers Functions of State Human Rights Commission

**Week 05:**

1. National Commission on Minorities. 2. National Commission on Schedule Caste and Schedule Tribes. 3. National Commission on Other Backward Class. 4. National Commission for protection of Child Rights

**Week 06:**

1. Socio-Economic development and Human Rights. 2. Insurgency problems and Human Rights violation in North East. 3. Human Right and AFSPA, 1958  
4. Institutional (National & International) responses to AFSPA.

**Week 07:**

1. Arbitrary arrest and detention of citizen. 2. Custodial crimes. 3. Enforced disappearance. 4. Extra Judicial Killing

**Week 08:**

1. Causes and Consequences to atrocities against women and children. 2. Women and children trafficking in North East India. 3. Torture, Rape and killing women and children 4. Problems of child labour

**Week 09:**

1. Protection of Rights of women and Children living with HIV/AIDS under the Indian Laws. 2. Protection of Rights of women and children living with HIV/AIDS under the International Laws. 3. Government responses to promote and protection of Rights of Women and Children living with HIV/AIDS. 4. Voluntary organisation and NGOs responses to promotion and protection of Rights of women and Children living with HIV/ AIDS.

**Week 10:**

1. Role of NGOs and protection of civil and political rights of citizen. 2. Human Rights Education and Role of NGOs. 3. Human Rights NGOs and statutory bodies. 4. Human Rights NGOs and Court

**Week 11:**

Interactions on topics discussed on 1st to 5th week

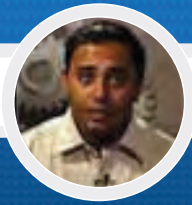
**Week 12:**

Interactions on topics discussed on 6th to 10th week.

**ABOUT INSTRUCTOR**

- Teaching experience of 20 years. His specialized in Jurisprudence, Constitutional Law, Adm. Law, Human Rights and International Humanitarian Law.
- Actively involved in disseminating Human Rights Education in Various part of India.
- Published 3 books (Global Justice & Rule of Law, Human Rights In Manipur, Constitutional Governance and Legal Institution) and has contributed many book chapters and research Articles
- Supervised 3 PhD Research Scholars under his guidance.





**DR. KINGSHUK CHATTERJEE**  
Associate Professor, Department of History,  
University of Calcutta

**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 6 weeks (6<sup>th</sup> Aug to 14<sup>th</sup> Sep, 2018)  
**EXAM DATE** : Tentatively Dec, 2018  
**NO OF CREDITS** : 3

**PRE-REQUISITES** : XII<sup>th</sup> standard pass; ease with English language

**OBJECTIVE OF COURSE**

1. A clear understanding of how mechanization and Industrial Revolution challenged European politics, society and economy
2. A basic grounding in the diverse response of European states to the challenges of Mechanized production system
3. A solid grasp of the origins, development and larger significance of the Russian Revolution of 1917
4. A basic understanding of the right wing ideologies in Europe in the early twentieth century, including Fascism and Nazism.



**LEARNING OUTCOME**

The course is designed to highlight the running thread of economic transformation in 19th century Europe, and weave it into the larger story of European state and international diplomacy. After completion of the course, students will be able to understand European imperialism of the 19th century and Communism and Fascism of the inter-war era as products of the material circumstances, rather than any ideological predisposition.

**COURSE PLAN**

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|--|--|
| <ol style="list-style-type: none"> <li>1. Industrial revolution and emergence of Industrial Societies in Europe</li> <li>2. Industrial Revolution: Great Britain's leadership</li> <li>3. Industrial Revolution: Great Britain</li> <li>4. Industrial Revolution: France</li> <li>5. Industrial Revolution: Germany</li> <li>6. Industrial Revolution: Germany II</li> <li>7. Industrial Revolution: Russia</li> <li>8. Industrial Revolution: Russia II</li> <li>9. Bismarckian diplomacy and the system of alliance</li> <li>10. Changes under Wilhelm II</li> <li>11. The Eastern Question: the problem and background</li> <li>12. Emergence of Balkan Nationalism: 1851-1878 and 1878-1914</li> </ol> | <ol style="list-style-type: none"> <li>13. Theories of imperialism and The Age of Empire</li> <li>14. Scramble for colonies and Clash of Empires</li> <li>15. The Alliance System: Triple Alliance and Triple Entente</li> <li>16. Outline of Russian History: 19th Century</li> <li>17. Russian Revolution: Growth of Revolutionary Movement</li> <li>18. Russian Revolution: Making of the Russian Revolution of 1917</li> <li>19. The October Revolution and The Civil War of 1818-20</li> <li>20. World Economic Depression</li> <li>21. Rise of Fascism</li> <li>22. Fascism in Italy</li> <li>23. The Rise of Nazism in Germany</li> </ol> |
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**ABOUT INSTRUCTOR**

- An adjunct at the Institute of Foreign Policy Studies, Calcutta University.
- Deputy Director, Centre for Pakistan and West Asian Studies, Calcutta University
- Director, Centre for Studies in China and her Neighbourhood, Calcutta University.
- Previously served as a Founding Professor in the Department of History, School of Humanities and Social Sciences at Shiv Nadar University and Fellow at the Maulana Abul Kalam Azad Institute of Asian Studies.
- A Fulbright Scholar-in-Residence at the United States Naval Academy in Annapolis, Maryland.





**SUBHAS RANJAN CHAKRABORTY**

Former Professor, Department of History, Presidency College, Kolkata

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 7 weeks (6<sup>th</sup> Aug to 21<sup>st</sup> Sep, 2018)

**EXAM DATE** : Tentatively Dec, 2018

**NO OF CREDITS** : 3

**PRE-REQUISITES** : XII<sup>th</sup> standard pass; ease with English language

**OBJECTIVE OF COURSE**

- A basic understanding of the significance European revolutions in the 18th and 19th century
- A basic understanding of the process of the emergence of nations and nationalism in modern Europe
- A basic understanding of the dynamics of global imperialism and wars in the nineteenth and early twentieth century

**LEARNING OUTCOME**

A student faithfully completing the course will gain a formative understanding of the political and economic processes which shaped modern European and Global politics and international relations during the last two centuries.



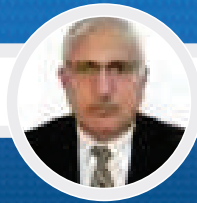
**COURSE PLAN**

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|--|---|
| 1. Crisis of the "Ancient Regime" in France                | 15. Liberalism and democracy in Britain                 |
| 2. Coming of the French Revolution                         | 16. Socialism in Europe                                 |
| 3. The Constitution of 1791                                | 17. France 1848-1871: Second Republic and Second Empire |
| 4. Rise and Fall of the Jacobin Republic                   | 18. France (1848-1871): The Second Empire               |
| 5. Revolution and Gender, Revolutionary Culture            | 19. The Unification of Italy                            |
| 6. The Directory and Coup d'etat Of 18th Brumaire          | 20. Making of a Unified Italy                           |
| 7. Napoleon as ruler: Internal Reorganization              | 21. Establishment of the Second Reich in Germany        |
| 8. Napoleon and Europe: 'Revolution on Horseback'          | 22. Germany: Road to Unification                        |
| 9. Napoleon: The Road to Decline                           | 23. World War I - The Origins                           |
| 10. Europe after Napoleon: Forces of continuity and change | 24. The End of World War I and the Peace of Versailles  |
| 11. Conservatism at Work: Metternich System 1815-1848      | 25. Post War European Order and its Problems            |
| 12. Restoration and Revolution in France: 1815 – 1848      | 26. Hitler, Nazism and The second World War             |
| 13. 1848: The Year of Revolutions                          | 27. The Slide to War: 1930s                             |
| 14. Revolution of 1848: Germany                            | 28. Origins of the Second World War                     |

**ABOUT INSTRUCTOR**

- Retired from Presidency College, Kolkata.
- Author of a bestseller primer on European history,
- Taught European history, including the history of the French Revolution and Napoleon, for several decades.
- Published on aspects of European history, on the history of Darjeeling and on social and cultural histories of sports and migration.
- Recent publications include papers on Voyage of Komagata Maru, the Derozians, and the Tudor State.
- A former President of the Mahanirban Calcutta Research Group, a research collective and a Vice-president of the Asiatic Society, Kolkata, Chakraborty is currently a guest teacher at the University of Calcutta.





**PROFESSOR NOOR AHMAD BABA**  
Dean Social Science - Central University of Kashmir

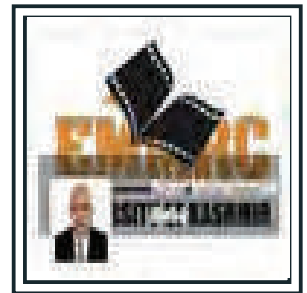
**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 7 weeks (09/07/2018 to 25/08/2018)  
**EXAM DATE** : 08/09/2018 (Tentative)  
**NO OF CREDITS** : 2

**PRE-REQUISITES** : 10+2 with knowledge of Social Science

**OBJECTIVE OF COURSE**

- The genesis of Classical Political Philosophy.
- To familiarizes students with the manner in which the political questions were first posed since the times of Socrates.
- To understand the contribution of Plato to the Western Political Philosophy
- To know about the life and works of Aristotle.
- To appreciate the text and context of Medieval Political Philosophy.
- Contribution of Machiavelli as an interlude inaugurating modern politics
- Contribution of Hobbes, Locke and Rousseau.
- Karl Marx and his contribution to western Political philosophy



**LEARNING OUTCOME**

The course “Classical Political Philosophy” is a core course in B.A.Hon's under the Choice Based Credit System (CBSE). After completion of the course students will be able to understand classical political philosophy through Greek antiquity. Students will also be familiarized with the manner in which the political questions were first posed. Machiavelli comes as an interlude inaugurating modern politics followed by Hobbes

**COURSE PLAN**

**Week 01:-**

- Political Philosophy of Plato-1
- Political Philosophy of Plato – II
- Political Philosophy of Plato – III
- Political Philosophy of Aristotle
- Interaction with the Resource Persons (5th day)

**Week 02:-**

- Political Philosophy of Saint Augustine
- Political Philosophy of Saint Thomas Aquinas
- Political Philosophy of Marsiglio of Padua
- Political Philosophy of Montesquieu
- Interaction with the Resource Persons (5th day)

**Week 03:-**

- Political Philosophy of Machiavelli
- Political Philosophy of Thomas Hobbes – I
- Political Philosophy of Thomas Hobbes - II
- Interaction with the Resource Persons (5th day)

**Week 04:-**

- Political Philosophy of John Locke – 01
- Political Philosophy of John Locke – 02
- Political Philosophy of Jean Jacques Rousseau – 01
- Political Philosophy of Jean Jacques Rousseau - 02
- Interaction with the Resource Persons (5th day)

**Week 05:-**

- Political Philosophy of Jeremy Bentham
- Political Philosophy of John Stuart Mill
- Political Philosophy of Immanuel Kant
- Political Philosophy of George Hegal
- Political Philosophy of Thomas Hill Green
- Interaction with the Resource Persons (5th day)

**Week 06:-**

- Karl Marx – A Profile
- Karl Marx – Life and Works
- Marxist Theory of Historical Materialism
- Marxian Concept of Class
- Conflict Theory with Special Reference to Karl Marx
- Interaction with the Resource Persons (5th day)

**ABOUT INSTRUCTOR**

- Masters from the Centre for Political Studies at the School of Social Sciences of Jawaharlal Nehru University (JNU)
- M. Phil and Ph.D. from the School of International Studies of Jawaharlal Nehru University (JNU).
- Completed an Advance Level International Diploma on Peace and Conflict Research from Uppsala University, Sweden.



**PROF. S. M. AFZALQADRI**

Former Dean &amp; Head, Department of Law, University of Kashmir

**TYPE OF COURSE** : UG**INTENDED AUDIENCE** : UG**COURSE DURATION** : 13 weeks (02/07/2018 to 22/09/2018)**EXAM DATE** : 29/09/2018 (Tentative)**NO OF CREDITS** : 4**PRE-REQUISITES** : 10+2**OBJECTIVE OF COURSE**

- Application of Indian Penal Code as a substantive Criminal law
- Extent, application and fundamental principle of law of crimes.
- To understand the offences against person, property, reputation, religion and state
- Crimes against women are on increase, therefore a special emphasis is given to explain these offences
- To understand subject of criminology including the Schools of criminology
- To study rights of accused, prison system and rights of prisoners.

**LEARNING OUTCOME**

The course "Criminal Law & Criminology" is a course in the subject of Law (B.A, L.L.B; LLB, LLM). This course will help students to supplement and enhance their understanding about different dimensions of Criminal law and Criminology. The course will enrich them about the important area of law.

**COURSE PLAN****Week 01**

1. Definitions under Indian Penal Code
2. Extent and operation of the Indian Penal Code
3. Elements of crime
4. Stages in commission of a crime

**Week 02**

- Constructive joint liability
- Mistake, Judicial and Executive acts
- Accident
- Necessity and Infancy

**Week 03**

- Insanity and Intoxication
- Consent and Good faith
- Right of Private Defence
- Abetment

**Week 04**

- Criminal Conspiracy
- Philosophy and Theories of Punishment
- Capital Punishment
- Murder (Section 300-302)

**Week 05**

- Culpable Homicide (Sec. 299)
- Hurt and Grievous Hurt
- Wrongful Restraint & Wrongful confinement
- Kidnapping and Abduction

**Week 06**

- Offences against Women
- Law relating to Rape
- Offences relating to Marriage
- Offences against Property

**Week 07**

- Criminal misappropriation of Property
- Cheating & its legal connotations
- Mischief
- Criminal defamation

**Week 08**

- Forgery under IPC
- Counterfeiting of coins
- Offences against State
- Offences against Religion

**Week 09**

- Definition of Criminology
- Schools of Criminology
- Rights of Accused
- Prison system and Prisoners rights

**Week 10**

- Juvenile delinquency and its control
- Drug Addiction: Its magnitude and control
- White color crime and corruption

**ABOUT INSTRUCTOR**

- Did his L.L.M in the year 1974 and Ph.D in 1986 from Aligarh Muslim University.
- Appointed as Lecturer in Kashmir University in 1976 and retired in 2007 as Professor, Head and Dean, Faculty of Law, University of Kashmir.
- Served as Joint Registrar Kashmir University, Dean Students Welfare, Chief Warden and Chief Proctor of University of Kashmir.
- Was awarded fellowship of Indian Society of Criminology.
- Written three books on Police, Copy Right Law, Criminology.
- Has attended 26 conferences both at national and international level.



**DR AMINA PARVEEN**

Sr. Assistant Professor, Post Graduate Department of Education,  
University of Kashmir

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 7 weeks (02/07/2018 to 18/08/2018)

**EXAM DATE** : 25/08/2018 (Tentative)

**NO OF CREDITS** : 2

**PRE-REQUISITES** : 10+2 with knowledge of Education

**OBJECTIVE OF COURSE**

- Basics of Educational Psychology
- Conceptual frame work of learning
- Understanding about the process of learning
- Know how about Intelligence and its different factors
- Description about the varied tests of intelligence
- Understanding personality and different approaches to its composition
- To have a look over the stage of adolescence
- To go through the various issues and problems of adolescents

**LEARNING OUTCOME**

The course "A Course on Educational Psychology" forms a part of Core and Some Discipline Centric in B.A Education Hon's and B.A Education under the Choice Based Credit System (CBSE). After completion of the course, this will supplement and enhance the understanding of students about different aspects of Educational Psychology.

**COURSE PLAN****Week 01**

01. Definition of psychology and its relationship with education, 02. Meaning and scope of Educational Psychology, 03. Nature, Concept and Factors of Learning, 04. Thorndike's Trial and Error theory of learning, Interaction with the Resource Persons

**Week 02**

05. Pavlov's Classical Conditioning Theory, 06. Skinner's Operant Conditioning Theory, 07. Insightful Learning—Kohler, et.al. 08. Transfer of Learning, Interaction with the Resource Persons

**Week 03**

09. Concept of Intelligence and IQ, 10. Spearman's Two Factor Theory of Intelligence, 11. E.L. Thorndike's Multi-Factor Theory of Intelligence, 12. L.L. Thurstone's Group - Factor Theory of Intelligence, Interaction with the Resource Persons (5th day)

**Week 04**

13. Simon-Binet Scale of Intelligence, 14. Cattell's Culture-fair Test of Intelligence, 15. Bhatia Battery Test of Intelligence, 16. Creativity- Concept and Nourishment, Interaction with the Resource Persons

**Week 05**

17. Personality and its Development,  
18. Type Theory of Personality- William Sheldon and Jung,  
19. Trait Theory of Personality- Allport,  
20. Self Theory of Personality- Carl Rogers, Interaction with the Resource Persons

**Week 06**

21. Psychoanalytical Theory of Personality- Sigmund Freud,  
22. Adolescence and their Psycho-Physical characteristics  
23. Problems of Adolescents  
24. Role of Education in solving problems of Adolescents  
Interaction with the Resource Persons

**Week 07**

25. Concept, Characteristics of Mental Health and Hygiene  
26. Adjustment and Defence Mechanism

**ABOUT INSTRUCTOR**

- Senior Assistant Professor, Department of Education, University of Kashmir.
- Did her master's degree in Education from the University of Kashmir and pursued her M.Phil and Ph.D from the same university (Kashmir University).
- Has worked as lecturer in the department of higher education J&K state prior to joining the University of Kashmir as a faculty in Education.
- Currently teaches at the Department of Education, University of Kashmir, and is contributing as resource person in the Directorate of Distance Education, University of Kashmir.







**DR. V. KANAKADURGAMBA**  
Faculty Member, Roda Mistry College of Social Work and  
Research Centre

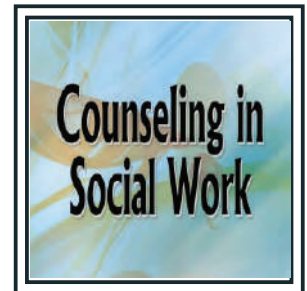
**TYPE OF COURSE** : UG  
**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 11 weeks (1st Oct to 31 Dec 2018)  
**EXAM DATE** : 13th Sep 2018 (Tentative)  
**NO OF CREDITS** : 4

**PRE-REQUISITES** : Intermediate , +2

### OBJECTIVE OF COURSE

- To bring out the Scope of Counseling.
- Techniques and Skills In Counseling
- Counseling Process
- Characteristics of an Effective Counselor
- Ethics in Counseling
- Meaning of Treatment
- Basic Treatment approaches in counseling
- Advanced Treatment approaches in counseling
- Counseling with children, Adolescents and marital partners



### LEARNING OUTCOME

Learner will be able to identify individuals, families and community problems with counseling in Social Work Practice, diagnoses and treats in solving them. They Learn the knowledge of counseling helps in their practice.

### COURSE PLAN

**Week I:** Counseling

**Week II:** Process of Counseling

**Week III:** Techniques and Skills in Counseling

**Week IV:** Ethics in Counseling

**Week V:** Treatment Approaches in Counseling 1

**Week VI:** Treatment Approaches in Counseling 1

**Week VII:** Treatment Approaches in Counseling 2

**Week VIII:** Counseling for Different Clients

**Week IX:** Counseling for Different Clients

**Week X:** Counseling for Different Clients

**Week XI:** Family and Group Counseling

**Week XII:** Counseling in Social Work Practice

### ABOUT INSTRUCTOR

- A Social work Educator with more than 4 decades of experience in teaching, research and training.
- Has presented number of papers in National and International Seminars.
- Guiding research students in Social work.





### NAVEEN KUMAR NANJUNDAN

Assistant Professor & Centre for Folk Culture Studies, School of Social Sciences,  
University of Hyderabad

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 13 weeks (1<sup>st</sup> Oct & 31<sup>st</sup> Dec 2018)

**EXAM DATE** : 30<sup>th</sup> December 2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Intermediate/Any Equivalent Examination

#### OBJECTIVE OF COURSE

- To provide students an exposure to disasters, their significance and types.
- To ensure that students begin to understand the relationship between vulnerability, disasters, disaster prevention and risk reduction.
- To gain a preliminary understanding of approaches of Disaster Risk Reduction
- To enhance awareness of institutional processes in the country.
- To develop rudimentary ability to respond to their surroundings with potential disaster response in areas where they live, with due sensitivity.

#### LEARNING OUTCOME

- Identify and describe broadly the social and economic impacts that occurs during disasters.
- Identify Global trends and types of Disasters.
- Analyse the role of Climate change, Development and Disasters in the Indian Context.
- Understand the significance of Disaster Risk reduction.
- Know the stake holders and policies involved in Disaster Management.
- Evaluate the causes, prevention and preparedness during disasters at local and global level.



#### COURSE PLAN

##### Week 01:- Disaster Management

Disaster and Disaster Management : Meaning, Concepts Related with Disaster and Disaster Management, Disasters in India, Issues Concerned with Disaster Management, Phases of Disaster Management

##### Week 02:- Types of Disasters

Natural Disasters, Case Study, Man-made Disasters, Case Study, Simple and Complex Disasters, Difference between Accidents and Disasters, Slow and rapid Onset Disasters, Module MCQ's Assignment

##### Week 03:- Disasters Management in India

Evolution of Disaster Management in India, National institute of Disaster Management, Disaster Management Act, 2005, The National Policy on Disaster Management 2009, National Plan on Disaster Management 2016, Module MCQ's, Module Questions Assignment

##### Week 04:- Refugee Problems

Refugee Problems – An Overview, Political, Social, Economic impacts of Disasters, Gender and Social issues during disasters, Principles of psychosocial issues and recovery during emergency situations, Relationship between Disasters, Development and Vulnerabilities, Module MCQ's, Assignment

##### Week 05:- Refugee Problems

Equity issues in disasters, Human Resettlement and Rehabilitation issues during and after disasters, Inter-sectoral coordination during disasters, Module MCQ's, Module Questions, Assignment

##### Week 06:- Stake Holders in Disaster Relief Management

Role of Central Government, Role of State Government, Role of District Administration, Role of Armed Forces, Role of Para Military Forces, Mid-Term Objective Type(MCQ's) Assessment

##### Week 07:- Stake Holders in Disaster Relief Management

Role of Fire Services, Role of International Organisations, Role of Non-Governmental Organisations, Role of National Cadet Corps, Role of Scouts and Guides, Role of Interface between Stake Holders, Module MCQ's, Assignment

Week 08:- Disaster Risk Reduction, Disaster Risk Reduction Strategies, Risk Reduction Preparedness Plans, Action Plans and Procedures, Module MCQ's

Module Questions, Assignment

##### Week 09:- Disaster Risk Reduction

Early warning Systems, Models in disaster preparedness, Components of Disaster Relief-(Water, food, sanitation, shelter, Health and Waste Management), Module MCQ's, Assignment

##### Week 10:- Disaster Risk Reduction

Community based Disaster Risk Reduction, Factors affecting Vulnerabilities

Disaster Risk Reduction Master Planning for the Future and Capacity Building, Module MCQ's, Assignment

##### Week 11:- Disaster Risk Reduction

Rehabilitation measures and long term reconstruction, Psychosocial care provision during the different phases of disaster., Module MCQ's, Assignment

##### Week 12:- Disasters and Development

Impact of Development projects, Changes in Land-use, Climate Change Adaptation, Module MCQ's, Module Questions, Assignment

##### Week 13:- Disasters and Development

Relevance of indigenous knowledge, appropriate technology and local resources, Global trends in disasters, Module MCQ's, Proctored End-Term Exam

#### ABOUT INSTRUCTOR

- An Assistant Professor at Centre for Folk Culture Studies, School of Social Sciences, University of Hyderabad.
- Served as a Lecturer of Social Work at the Roda Mistry College of Social Work & Research Centre, Hyderabad, during 2005-2008.
- Serving since 2010 as a faculty member in University of Hyderabad.
- Teaching and research interests are Folklore and Community Development, Field Work and Community Studies, Ritual Studies, Disaster Management & ICT in Education.





### PROF. K. VISHWESHWAR RAO

Department of Social Work, Andhra University, Visakhapatnam  
Andhra Pradesh

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (1<sup>st</sup> Oct to 28<sup>th</sup> Dec 2018)

**EXAM DATE** : 30<sup>th</sup> Dec 2018 (Tentative)

**NO OF CREDITS** : 4

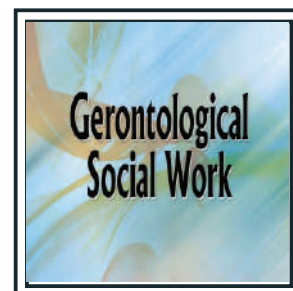
**PRE-REQUISITES** : Intermediate , +2

#### OBJECTIVE OF COURSE

- To bring out the Concept and Growth of Gerontology and Geriatrics.
- To discuss Trends in Population Ageing.
- To give a knowledge of Factors Contributing to Growing Problems of The Elderly in India
- To bring out the Problems of the Elderly in India
- Older Persons and the Family
- Old Age Homes - Types and Services Provided
- United Nations Organization and the Elderly
- Policies & Programs of elderly Legislations for the elderly

#### LEARNING OUTCOME

This course on Gerontological Social Case Work is useful in dealing with Factors Contributing to growing Problems of the Elderly in India and Older Persons & the Family. Also about Gerontological Social Work Practice in the Community.



#### COURSE PLAN

**WEEK - 01** Gerontology and Geriatrics: Concept and Growth

**WEEK - 02** Trends in Population Ageing

**WEEK - 03** Factors Contributing to growing Problems of the Elderly in India

**WEEK - 04** Problems of the Elderly in India

**WEEK - 05** Older Persons and the Family

**WEEK - 06** Older Age Homes: Types and Services Provided

**WEEK - 07** United Nations Organization and the Elderly

**WEEK - 08** Policies and Programmes of elderly

**WEEK - 09** Legislations for the elderly

**WEEK - 10** Legislations for the elderly

**WEEK - 11** Gerontological Social Work Practice in the Community

**WEEK - 12** Ageing in India

#### ABOUT INSTRUCTOR

- M. Phil. in Social Work for work on A Study on the Problems of the Displaced Persons of Visakhapatnam Steel Project under Prof.. B. Vijayalakshmi( Andhra University )Awarded on 17-03-1988
- Ph. D. in Social Work for work on Rural Elderly in Andhra Pradesh: A study of their socio-demographic profile under Prof. B. Devi Prasad( Andhra University )Awarded on 07-07-1996 .



**DR. JHANSI RANI**

Head & Associate professor, Department of Public Administrator, Arts and Science College  
for Women, Andhra Mahila Sabha, Osmania University  
Campus

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 12 weeks (1<sup>st</sup> Aug to 6<sup>th</sup> Nov 2018)

**EXAM DATE** : 12<sup>th</sup> November 2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Intermediate / Any Equivalent Examination

**OBJECTIVE OF COURSE**

- This course make you understand the Historical Background and Evolutionary Perspectives of Indian Administration and Different Contexts of Indian Administration.
- And also explains the State Administration: Structure and Process and Mechanisms.
- Finally let you learn Technology and Integrity in Indian Public Administration and Control Mechanism over Administration

**LEARNING OUTCOME**

By the end of the course the learner would be able to gain quantitative knowledge on various theoretical aspects of Public Administration, with necessary conceptual frame work.

**COURSE PLAN**

**WEEK - 01** Historical Background and Evolutionary Perspectives of Indian Administration

**WEEK - 02** Different Contexts of Indian Administration

**WEEK - 03** Constitutional Context of Indian Administration

**WEEK - 04** Union Executive and Administration Structure and Process

**WEEK - 05** Secretariat and Directorates **WEEK - 06** Public Enterprises in India Emerging Issues

**WEEK - 07** State Administration : Structure and Process

**WEEK - 08** State Administrative Mechanisms

**WEEK - 09** District Administration : Structure and Process

**WEEK - 10** Emerging Issues in Modern Administration

**WEEK - 11** Technology and Integrity in Indian Public Administration

**WEEK - 12** Control Mechanism over Administration

**ABOUT INSTRUCTOR**

- 18 years of experience in Under Graduate teaching in public Administration.
- As a BOS Chairperson designed curriculum and introduced new courses like Good Governance, Law and Justice for Women, Disaster Management, Civil Services in India and General Studies at college level.
- Published Articles and Chapters in reputed Journals and books.
- Presently holding the position of Member Secretary to Academic Council. Member of Board of Studies, Osmania University, PG. and other autonomous Colleges.
- Worked as a subject coordinator for CEC –EMRC for Public Administration lessons during 2016-17 and Subject expert and coordinator for CEC –EMRC MOOCS -2018.



**DR. JHANSI RANI**

Head & Associate professor, Department of Public Administration, Arts and Science College  
for Women, Andhra Mahila Sabha, Osmania University  
Campus

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 10 weeks (2<sup>nd</sup> July to 8<sup>th</sup> Sep, 2018)

**EXAM DATE** : 17<sup>th</sup> September 2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Intermediate / Any Equivalent Examination

**OBJECTIVE OF COURSE**

- This course provides the basic meaning and Nature of Public Administration.
- This course will try to understand the Significance of Public Administration in the changing context of Liberalisation, Privatisation and Globalisation (LPG); Oriental and Classical Approaches; Classical Thought: Bureaucracy; and Ecological and Social Justice Approaches.

**LEARNING OUTCOME**

By the end of the course the learner would be able to gain quantitative knowledge on various theoretical aspects of Public Administration, with necessary conceptual frame work.

**COURSE PLAN**

**Week I:** Introduction to Public Administration

**Week II:** Evolution and Status of Public Administration

**Week III:** Classical Theories

**Week VI:** Bureaucracy and Human Relations Movement and Behaviouralism

**Week V:** Bureaucracy and Human Relations Movement and Behaviouralism

**Week VI:** Ecological Development and Social Justice Approaches

**Week VII:** Organizational Humanism & Market Theories

**Week VIII:** Principles of Public Administration

**Week XI:** Concepts of Public Administration

**Week X:** Emerging Trends

**ABOUT INSTRUCTOR**

- 18 years of experience in Under Graduate teaching in public Administration.
- As a BOS Chairperson designed curriculum and introduced new courses like Good Governance, Law and Justice for Women, Disaster Management, Civil Services in India and General Studies at college level.
- Published Articles and Chapters in reputed Journals and books.
- Presently holding the position of Member Secretary to Academic Council, Member of Board of Studies, Osmania University, PG. and other autonomous Colleges.
- Worked as a subject coordinator for CEC –EMRC for Public Administration lessons during 2016-17 and Subject expert and coordinator for CEC –EMRC MOOCS -2018.





### DR. V. KANAKADURGAMBA

Faculty Member, Roda Mistry College of Social Work and Research Centre

**TYPE OF COURSE** : UG

**INTENDED AUDIENCE** : UG

**COURSE DURATION** : 11 weeks (2<sup>nd</sup> July to 28<sup>th</sup> Sep 2018)

**EXAM DATE** : 13<sup>th</sup> Sep 2018 (Tentative)

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Intermediate , +2

#### OBJECTIVE OF COURSE

- Understand the needs, problems and behavior of the individuals.
- Learn the skills and techniques of Social Case Work.
- Learn the Principles and Process of Social Case work.
- Develop ability to use different therapeutic models of Social Case work to solve. Individual problems.

#### LEARNING OUTCOME

Learner will be able to identify individual problems, diagnoses and treats in solving them. They Learn to establish professional relationship to achieve the goal.



#### COURSE PLAN

**Week I:** Definition and Scope of Social Case Work

**Week II:** Definition and Scope of Social Case Work

**Week III:** Social Case Work Process

**Week IV:** Social Roles-Problems & Adaptation

**Week V:** Social Case Work with Families

**Week VI:** Assessment tools in Social Case Work

**Week VII:** Approaches & Models in Social Case Work

**Week VIII:** Case Worker- Client Relationship

**Week IX:** Case Worker- Client Relationship

**Week X:** Social Case Work in Different Settings

**Week XI:** Recording in Social Case Work

#### ABOUT INSTRUCTOR

- Social work Educator with more than 4 decades of experience in teaching, research and training.
- Presented number of papers in National and International Seminars.
- Till date continues to contribute to the field of Social work Education. Guiding research students in Social work.



**DR. D.K.LAL DAS**

Research Consultant , Osmania University

**TYPE OF COURSE** : UG**INTENDED AUDIENCE** : UG**COURSE DURATION** : 12 weeks (1<sup>st</sup> Oct to 28<sup>th</sup> Dec 2018)**EXAM DATE** : 30<sup>th</sup> Dec 2018 (Tentative)**NO OF CREDITS** : 4**PRE-REQUISITES** : Intermediate , +2**OBJECTIVE OF COURSE**

- To understand the need for scientific approach to Social Welfare Administration.
- To understand the meaning, nature, scope and importance of social welfare administration.
- To develop ability to administer social policies and programmes.

**LEARNING OUTCOME**

This course on Social welfare administration is useful in dealing with the social service and social welfare organisation.

**COURSE PLAN****WEEK - 01** Concept of Social Welfare Administration**WEEK - 02** Types and Models of Social Welfare Organisations**WEEK - 03** Changing Trends and Problems of Voluntary Organisations**WEEK - 04** Organisational Setup of Social Welfare Organisations**WEEK - 05** Role of Social Welfare Administrator**WEEK - 06** Establishment and Registration of Social Service / Social Welfare Organisation**WEEK - 07** Principles of Social Welfare Administration**WEEK - 08** Social Welfare Administration as a Method of Social Work**WEEK - 09** Funding of Social Welfare Organisation**WEEK – 10** Social Welfare Programmes and Services**WEEK – 11** Social Welfare Programmes and Services**WEEK – 12** Evaluation of Social Welfare Programmes and Services**ABOUT INSTRUCTOR**

- Social Work Researcher and Educator with more than four decades of experience in Teaching, Research, Training and Consultancy.
- Former Principal and Director of a College of Social Work in Hyderabad.
- Has directed several research projects, authored several books, and presented papers at national and international seminars.
- Till date continues to contribute to the field of Social Work Research by conducting research methodology workshops and guiding research scholars from across the globe.



**DR. D.K.LAL DAS**

Research Consultant , Osmania University

**TYPE OF COURSE** : UG**INTENDED AUDIENCE** : UG**COURSE DURATION** : 12 weeks (2<sup>nd</sup> July 2018 to 28<sup>th</sup> Sep 2018)**EXAM DATE** : 13<sup>th</sup> Sep 2018 (Tentative)**NO OF CREDITS** : 4**PRE-REQUISITES** : Intermediate , +2**OBJECTIVE OF COURSE**

- To understand the need for scientific approach to human inquiry
- To understand the meaning, nature, scope and importance of social work research.
- To develop ability to conceptualise, formulate and conduct research study would include a broad range of research skills such as Selection and Formulation of research problem, selection of research strategy, developing tools of data collection, use of sampling methods and techniques, etc.).
- To develop research report writing skills.

**LEARNING OUTCOME**

Learner would be able to identify and formulate his / her research topic, formulate hypothesis, select a sampling design, select a research instrument, collect, process and analyse data and write research report.

**COURSE PLAN****Week I** : Social Science Research**Week II** : Methods of Social Science Research**Week III** : Social Work Research**Week IV** : Research Designs**Week V** : Basic Elements of Social Science Research**Week VI** : Formulation of Research Problem**Week VII** : Sampling Designs**Week VIII** : Methods and Tools of Data Collection**Week IX** : Processing and Analysis of Data**Week X** : Social Statistics**Week XI** : Writing of Research Report**ABOUT INSTRUCTOR**

- Social Work Researcher and Educator with more than four decades of experience in Teaching, Research, Training and Consultancy.
- Former Principal and Director of a College of Social Work in Hyderabad.
- Directed several research projects, authored several books, and presented papers at national and international seminars.
- Till date continues to contribute to the field of Social Work Research by conducting research methodology workshops and guiding research scholars from across the globe.







**National Institute of Technical Teachers  
Training and Research**

## Teacher Education Certificate Courses



**MHRD**



# Teacher Education Certificate Courses

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**DR.S.RENUKADEVI**

Professor & Head, Dept. of Engineering Education National Institute Of  
Technical Teachers Training & Research  
(NITTR)

**TYPE OF COURSE** : Teacher Education Certificate Course **COURSE DURATION** : 9 weeks (August 27 to October 28, 2018)  
**INTENDED AUDIENCE** : PG Engineering Students/Teachers **EXAM DATE** : November 2018  
working in Polytechnic/Engineering **NO OF CREDITS** : 3  
Colleges/Universities with minimum Qualification PG – All Science/Engineering/Technology Disciplines  
(M.Sc/M.E/M.Tech/M.S (By research))

**PRE-REQUISITES** : Teacher of Engineering/Science Subjects

**OBJECTIVE OF COURSE**

- Establish the need for understanding learners in teaching learning process
- Understand the modern day learner's personality characteristics
- Appreciate the importance of personality tests and inventories
- Comprehend strategies for motivating students
- Apply techniques for improving the personality of present day learners thereby improving classroom teaching
- Use the basic counseling skills for student issues
- Comprehend NLP strategies for solving student issues

**LEARNING OUTCOME**

The course is expected to make a shift in the teaching learning process with enhanced competencies in teachers for handling present day learners.

**COURSE PLAN**

**Week 1:** Teaching Learning Process

**Week 2:** Student characteristics

**Week 3:** Psychological Testing

**Week 4:** Student Motivation

**Week 5:** Physical and Cognitive development

**Week 6:** Emotional Intelligence and Relationship Management

**Week 7:** NeuroLinguistic Programming

**Week 8:** Counselling Skills

**Week 9:** Summary and Assessment

**ABOUT INSTRUCTOR**

Dr. S. Renukadevi is currently Professor and Head of Department of Engineering Education, NITTR, Chennai. She holds a Doctorate in Computer Applications (Engg Education), M.phil in Computer Science and Masters in Computer Application. She has 28 years of experience in teaching and research, of which 23 years in teacher training and research at NITTRc. Her expertise includes Pedagogy, Educational Psychology, Soft Skills, Computer applications in education & training and Gender Development/Studies. She has coordinated more than 250 short term programmes and acted as resource person in several national and international programmes. She has been coordinating the M.tech (HRD) programme of the institute. She has authored more than 40 research papers and contributed chapters in books. She has produced 4 Ph.D dissertations and currently guiding 3 scholars in Engineering Education. She has attended several National and International conferences and presented papers. She has visited Germany, UK, Ireland and Malta. Her interest in Student Psychology has resulted in new methodologies in teacher training. She is a trained NLP practitioner. She has conducted an international school psychology conference of ISPA (US). She is affiliated to psychology organisations such as IAAP (Regional President) and InSPA (State President, TN).





**DR. G. JANARDHANAN**  
Associate Professor & Head  
i/c Centre for Envi. Management, NITTR



**DR. V. SHANMUGANEETHI**  
Asst. Professor, Dept. of Computer  
Science and Engineering



**DR. KSA DINESH KUMAR**  
Asst. Professor, Dept. of Civil  
Engineering

**TYPE OF COURSE** : Teacher Education Certificate Course **COURSE DURATION** : 8 weeks (August 27 to October 22, 2018)  
**INTENDED AUDIENCE** : Teachers from Technical institutions **EXAM DATE** : November 2018  
**PRE-REQUISITES** : Basic knowledge of Teaching Learning Practice **NO OF CREDITS** : 3

### OBJECTIVE OF COURSE

To scientifically design the assessment tool for assessing the quantitative and qualitative performance of a student.

### LEARNING OUTCOME

To apply various assessment methodologies in the teaching learning practice.

### COURSE PLAN

**Week 1:** Introduction to Assessment – Evaluation – Need for the Assessment – Different forms of Evaluation – Diagnostic Assessment – Formative Assessment – Summative Evaluation – Graduate Attributes and Assessment

**Week 2:** Complexity of the questions – Mapping Two-dimensional approach of preparing the Instructional objectives with complexity of questions – Factual Questions – Conceptual Questions – Procedural knowledge Questions – Meta- Cognitive Questions

**Week 3:** Types of Evaluation – Norm reference – Criterion reference – Types of questions – Supply type – Selection type – Numerical problem solving.

**Week 4:** Introduction to Table of Specifications (TOS) – Modules vs Levels in the TOS – Scheme of Evaluation in TOS – Factors to be considered for preparing TOS.

**Week 5:** Characteristics of evaluation tool – Validation of the tool - Reliability – Validity vs Reliability – Logical and statistical validity – Usability – Discrimination factors in the Evaluation tool

**Week 6:** Standardized Tests versus Informal Classroom Tests - Standardized Achievement Test Batteries - Achievement Tests in Specific Areas - Customized Achievement Tests - Individual Achievement Tests - Achievement and Aptitude Tests - Scholastic Aptitude and Learning Ability - Group Tests of Learning Ability

**Week 7:** Introduction to Rubrics – Need for the rubrics – Holistic rubric – Analytic rubric – preparation of Criteria for Rubrics – Consolidation of rubric values

**Week 8:** Methods of Interpreting Test Scores - Grade Norms - Percentile Rank - Standard Scores - Profiles - Skill Analysis - Cautions in Interpreting Test Scores



### ABOUT INSTRUCTOR

Dr.V.Shanmuganeethi, Assistant Professor, Department of Computer Science and Engineering. He has been working in the domain of web technologies, Cloud computing, programming Paradigm, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 150 training programmes on CSE discipline and Engineering Education. Dr.G.Janardhanan, Associate Professor & Head i.c , Centre for Environmental Management . He has been working in the domain of Civil Engineering, Environmental science, Sustainable development, Smart City, Instructional technologies and Teaching – Learning Practices and Principles.He has developed various projects for Engineering Education includes e-content development and Virtual Laboratory. Dr. K S A Dinesh Kumar, Assistant Professor, Department of Civil Engineering. He has been working in the domain of Structural Engineering, Geographical Information System, Sustainable development, Smart City, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 100 training programmes on Sustainable Development, Green building and Engineering Education.





**DR. G. JANARDHANAN**  
Associate Professor & Head  
i/c Centre for Envi. Management, NITTR



**DR. V. SHANMUGANEETHI**  
Asst. Professor, Dept. of Computer  
Science and Engineering



**DR. K. S. A. DINESH KUMAR**  
Asst. Professor, Dept. of Civil  
Engineering

**TYPE OF COURSE** : Teacher Education Certificate Course **COURSE DURATION** : 4 weeks (19<sup>th</sup> Nov to 18<sup>th</sup> Dec, 2018)

**INTENDED AUDIENCE** : Teachers from Technical institutions **EXAM DATE** : December 2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Basic skills in using Web

### OBJECTIVE OF COURSE

To use MOODLE Learning Management System to improve active and collaborative learning environment.  
To organize and store course content in a secure web-based environment where the students can access

### LEARNING OUTCOME

To practice MOODLE LMS for class room teaching, sharing learning material and student assessment.



### COURSE PLAN

#### Week 1:

Introduction to Learning Management System (LMS) – Learning Theories - Instructional Technology with Pedagogy – Applications of Educational Technology – Content Management System (CMS) and LMS – Features of LMS – Assignment - Introduction to MOODLE LMS – Facts and figures of MOODLE LMS – MOODLE Installation and configuration – Assignment

#### Week 2:

Course Creation and Management – Course Category – Course Format – Course study Plan – Course Activity – Assignment - Chat – Choice – External tool – Forum – Glossary – Lesson – Quiz – SCROM Package – Survey – Wiki - Course Resources – e-Book – File Management – Folder Management – Video Content – Audio Content - Page – URL Management

#### Week 3:

Course Administration – Enroll users in Courses – Filters - Report Generation - Grade book setup for course - Site Administration in MOODLE LMS – Notification – Users – Grades – Badges – Plugins - Security – Appearance – Front page Settings

#### Week 4:

User Management – User Accounts – User Actions – User Profile – Upload user Details – User Permissions – User Policies – Define Roles - Question bank — Import and Export functions – Third party SCORM pack questionnaire

### ABOUT INSTRUCTOR

**Dr.V.Shanmuganeethi**, Assistant Professor, Department of Computer Science and Engineering. He has been working in the domain of web technologies, Cloud computing, programming Paradigm, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 150 training programmes on CSE discipline and Engineering Education. **Dr.G.Janardhanan**, Associate Professor & Head i.c. Centre for Environmental Management . He has been working in the domain of Civil Engineering, Environmental science, Sustainable development, Smart City, Instructional technologies and Teaching – Learning Practices and Principles. He has developed various projects for Engineering Education includes e-content development and Virtual Laboratory. **Dr. K S A Dinesh Kumar**, Assistant Professor, Department of Civil Engineering. He has been working in the domain of Structural Engineering, Geographical Information System, Sustainable development, Smart City, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 100 training programmes on Sustainable Development, Green building and Engineering Education.



**DR. P. MALLIGA**

Associate Professor & Head, Centre for Educational Media and Technology, National Institute of Technical Teachers Training & Research (NITTTR)

**SHRI. FELIX AROKIYA RAJ, A.P.**

Assistant Professor, Centre for Educational Media and Technology, National Institute Of Technical Teachers Training & Research (NITTTR)

**TYPE OF COURSE** : Teacher Education Certificate Course **COURSE DURATION** : 8 weeks (August 27 to October 22, 2018)  
**INTENDED AUDIENCE** : Teachers, Research Scholars, **EXAM DATE** : November 2018  
 Instructional Designer, E-Learning **NO OF CREDITS** : 3  
 Specialist, Teacher Certification Programme

**PRE-REQUISITES** : Knowledge of basic digital literacy like internet browsing, email communication

### OBJECTIVE OF COURSE

With the advent of Internet and world wide web (www), the access to information has become very easy and the entire world is moving towards digitization. Twenty first century students learn in a global classroom and not necessarily within four walls. They are more inclined to find information by accessing the Internet through mobile phones and computers, or chatting with friends on a social networking site. The advancements in technology and the plethora of powerful and innovative digital devices and tools have a great potential to improve educational outcomes. Educators must understand that the use of digital content and devices will improve teaching and learning and thus enhance educational opportunities and benefit the Millennial. This course on E-content development is meant to understand the meaning and standards of E-content, learning objects, designing and development of digital resources for teaching and learning. Thus this course aims in providing the knowledge and skill for teachers to cater to present day learners and their learning styles.



### LEARNING OUTCOME

Develop Multimedia content or E-content using web tools by applying the principles of Instructional Design.

### COURSE PLAN

#### Week 1: E-learning

Understand E-Learning with respect to its need, trends, benefits and challenges

Modules: E-Learning – Scope and Types, E-Learning Trends, Millennial Learners, E-Learning Technologies, E-Learning Benefits and Challenges, Need for E-Content Development

#### Week 2: Instructional Design Models

Identify the multimedia principles and elements for E-Learning

Modules: E-Content Nature and Scope, E-Content Elements, Multimedia Principles, Instructional Design Models, Life Cycle of E-Content, Learning Objects & Standards

#### Week 3: E-learning Standards and Tools

Explain the components of Authoring Tools and E-Learning standards

Modules: Content Authoring Tools & Usage, E-Learning Authoring Tools and Technologies, SCORM & Tin Can API, Free/Cloud Authoring Tools

#### Week 4: E-Publishing

Describe the salient features of E-Content Development Tools

Modules: Documentation & Bookmarking Tools, E-Publishing, Concept of creating E-Books, Presentation Tools, Online Collaborative Tools

#### Week 5: Graphics and Animation

Develop Graphics/Images for brochure cover page

Modules: Graphics and Image File Formats, GIMP & its features, Animation Types and its usage, Animation Tool Features

#### Week 6: Audio and Podcasting

Apply the audio editing techniques for creating podcasts

Modules: Basic Principles of Sound, Audio Recording Tools, Audio Editing Techniques, Use of Podcasting in Education

#### Week 7: Screencast Videos

Develop the E-Content using Social Media Networks Modules: Creating Screen-cast Video, Video Uploading & Sharing, Education Channel Analytics, Photo Slideshow Creation

#### Week 8: Creating Video lessons and Quizzes

Understand the techniques to create customized lessons

Modules: Customized lessons using TED-ED, Online Quizzes, Survey Forms

### ABOUT INSTRUCTOR

Dr. P. Malliga is working as Senior System Analyst and Head in charge of Centre for Educational Media and Technology, National Institute of Technical Teachers Training and Research, Taramani, Chennai. She has got 28 years of experience in Teaching and Research and Development. Her areas of interest in training include ICT enabled learning and Teaching, Instructional Design, E-learning and Open Education. She has published 20 research papers in refereed National / International journals and Conferences in the area of Computer Science and Engineering, ICT based Education and Training, Educational Technology. She has contributed to leading Material (Course Material) on Instructional Design for E-learning for MCA Distance Mode program for Anna University. She has conducted around 350 courses for Polytechnic consultancy projects for producing multimedia instructional materials on Computer Networks; producing 10 CBTs on 10 different subjects of Computer Science; producing studio based video lectures on Computer Science subjects for satellite based education through Gyandarshan. She has authored a self Instructional and Engineering College teachers in the areas of Computer Science and Educational Technology. She has trained around 400 Overseas Teachers in the areas of Information Technology, Educational Video Production and Educational Media Production for E-learning. A. P. Felix Arokiya Raj is an assistant professor in the Center for Educational Media & Technology (CEMT) of National Institute of Technical Teachers Training and Research (NITTTR) Chennai. He specializes in the areas of E-Learning Technologies and Instructional Resource Development. He obtained his Master's in Electronic Media Informatics from Anna University, Chennai. His PhD research study is on effective MOOC design. He has been involved in E-Content development and Instructional Design for NMEICT project.





**DR. G. JANARDHANAN**  
Associate Professor & Head i/c Centre  
for Envi. Management, NITTR



**DR. V. SHANMUGANEETHI**  
Asst. Professor, Dept. of Computer  
Science and Engineering



**DR. K. S. A. DINESH KUMAR**  
Asst. Professor, Dept. of Civil  
Engineering

- TYPE OF COURSE** : Teacher Education Certificate Course    **COURSE DURATION** : 8 weeks (Sept 02 to Oct 29, 2018)
- INTENDED AUDIENCE** : Faculty member of all technical institutions & Aspiring Teachers    **EXAM DATE** : December 2018
- PRE-REQUISITES** : Faculty members should have knowledge / experience in classroom instruction.    **NO OF CREDITS** : 3

## OBJECTIVE OF COURSE

In the end of this course the participants will be able to:

- Design an effective lesson utilizing instructional technology resources and integrate into a blended learning environment.
- Develop a plan to implement blended learning into your classroom.
- Explore online FOSS resources and digital tools as an integral component of blended learning.
- Integrate blending into laboratory instruction.
- Understand how objectives of blended learning will impact decisions about institutional planning.
- Evaluate the idea of a flipped classroom Gain understanding of what it really means to flip your classroom.
- Explore different formative and summative assessment strategies for a blended classroom
- Design and develop assessment timeline.



## LEARNING OUTCOME

The participants will be design and develop their blended classroom for developing better knowledge society. The faculty members will have the necessary skills and resources to provide a blended and flipped classroom environment for their students. It promotes better student engagement and student achievement.

## COURSE PLAN

**Week 1:** Introduction and Blended Learning Models: An overview, definition, and introduction to Teaching with technology – Benefits and Challenges of Blended Learning

**Week 2:** Designing Blended Classroom: Instructional Design Models – Process of Blending Learning - Different models of blended learning – Design for Blended Learning - Explore how to help students transition smoothly from traditional education to blended learning.

**Week 3:** Tools & Resources for creating Blended Classroom:

Explore the choices of software, hardware, and facilities – Practice exercise to create blending environment – Content creation – Assessment tools.

**Week 4:** Reengineering Role of Faculty Members & Redesigning the educational institution: Discover the role of the teacher is digital learning – Student activity and collaboration - Transition from traditional classroom to Virtual classroom – Infrastructure requirements.

**Week 5:** Blending of Laboratory courses: Virtual Laboratory:

Role of Laboratory – Conceptual knowledge and procedural knowledge – Blending through Virtual laboratory – Assessment

**Week 6:** Blending with SWAYAM Courses / NMEICT:

Learn the steps of the design process to begin development of your own blended learning implementation using SWAYAM / NPTEL Courses.

**Week 7:** Venturing into Flipped classroom. Introduction to flipped classrooms – The golden rules of flipping – Student engagement in Flipping.

**Week 8:** Framing Assessment for Blended Learning: How does it work – Framing Formative and Summative assessment – Development of Assessment plan – Preparation of Rubrics.

## ABOUT INSTRUCTOR

**Dr. G. Janardhanan**, Associate Professor & Head i/c , Centre for Environmental Management . He has been working in the domain of Civil and Environmental Engineering, Sustainable development, Instructional technologies and Teaching – Learning Practices. He has coordinated more than 100 training programmes both Nationally and Internationally in the area of Sustainable Development, Green building concepts, Water Quality Analysis, Geoenvironmental Engineering, Blended and Flipped Classroom, Technology Enabled Teaching Learning, Student Evaluation and Instructional Design and Delivery. He has transformed through training more than 260 international participants and 2500 plus national participants. He has developed virtual laboratory for environmental engineering laboratory and handled several national and international projects in the area of engineering, technology and Engineering Education. **Dr. V. Shanmuganeethi**, Assistant Professor, Department of Computer Science and Engineering. He has been working in the domain of web technologies, Cloud computing, programming Paradigm, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 150 training programmes on CSE discipline and Engineering Education. **Dr. K. S. A. Dinesh Kumar**, Assistant Professor, Department of Civil Engineering. He has been working in the domain of Structural Engineering, Geographical Information System, Sustainable development, Smart City, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 100 training programmes on Sustainable Development, Green building and Engineering Education. He has developed various projects for Engineering Education includes e-content development and Virtual Laboratory.





**DR. G. JANARDHANAN**  
Associate Professor & Head i/c Centre  
for Envi. Management, NITTR



**DR. V. SHANMUGANEETHI**  
Asst. Professor, Dept. of Computer  
Science and Engineering



**DR. K. S. A. DINESH KUMAR**  
Asst. Professor, Dept. of Civil  
Engineering

**TYPE OF COURSE** : Teacher Education Certificate Course    **COURSE DURATION** : 4 weeks (Oct 29 to Nov 26, 2018)  
**INTENDED AUDIENCE** : Faculty member of all technical institutions & Aspiring Teachers    **EXAM DATE** : December 2018  
**PRE-REQUISITES** : Faculty members should have knowledge / experience in classroom instruction.    **NO OF CREDITS** : 2

## OBJECTIVE OF COURSE

In the end of this course the participants will be able to:

- Design an effective laboratory utilizing technology enabled VLAB technology resources and integrate into a mainstream environment.
- Enhance the large group of student instruction in laboratory and deepening their knowledge.
- Explore online FOSS resources and digital tools as an integral component of laboratory instruction.
- Develop flipped approach to integrate theory and practice of laboratory instruction.
- Explore different formative and summative assessment strategies for a laboratory assessment.

## LEARNING OUTCOME

The participants will be design and develop their laboratory instruction using virtual laboratory increasing better knowledge society. The faculty members will have the necessary skills and resources to provide a virtual laboratory environment for their students. It promotes better student engagement and student achievement.



## COURSE PLAN

**Week 1:** Introduction: An overview, definition, and introduction to laboratories in technical education – Different types of Laboratory instruction - Benefits and Challenges in laboratory instruction – Present status and the path ahead.

**Week 2:** Enhancing laboratory instruction using virtual laboratories: Simulation versus real experimentation – Computer in the laboratory - Explore how to help students transition smoothly from traditional Laboratory to Virtual Laboratory – Procedural learning to Conceptual learning – Online tools and resources for virtual laboratory - Learn the steps of the design process to begin development of your own implementation using Vlab - NMEICT.

**Week 3:** Performance Assessment in Laboratory:

How does it work – Framing Formative and Summative assessment for laboratory instruction – Development of Assessment plan – Preparation of Rubrics. Explore the choices of software, hardware, and facilities – Practice exercise to create blending environment – Content creation – Assessment tools.

**Week 4:** Future look of laboratory instruction and academic practice: Discover the role of the teacher is Technology enabled laboratory instruction – Changing Physical Appearance – Student activity and Closer collaboration.

## ABOUT INSTRUCTOR

**Dr. G. Janardhanan**, Associate Professor & Head i/c, Centre for Environmental Management. He has been working in the domain of Civil and Environmental Engineering, Sustainable development, Instructional technologies and Teaching – Learning Practices. He has coordinated more than 100 training programmes both Nationally and Internationally in the area of Sustainable Development, Green building concepts, Water Quality Analysis, Geoenvironmental Engineering, Blended and Flipped Classroom, Technology Enabled Teaching Learning, Student Evaluation and Instructional Design and Delivery. He has transformed through training more than 260 international participants and 2500 plus national participants. He has developed virtual laboratory for environmental engineering laboratory and handled several national and international projects in the area of engineering, technology and Engineering Education. **Dr. V. Shanmuganeethi**, Assistant Professor, Department of Computer Science and Engineering. He has been working in the domain of web technologies, Cloud computing, programming Paradigm, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 150 training programmes on CSE discipline and Engineering Education. **Dr. K. S. A. Dinesh Kumar**, Assistant Professor, Department of Civil Engineering. He has been working in the domain of Structural Engineering, Geographical Information System, Sustainable development, Smart City, Instructional technologies and Teaching – Learning Practices and Principles. He has coordinated more than 100 training programmes on Sustainable Development, Green building and Engineering Education. He has developed various projects for Engineering Education includes e-content development and Virtual Laboratory.







## PROF. DR. E.S.M.SURESH

Professor & Head, Department of Civil Engineering, National Institute of Technical Teachers Training & Research.  
(NITTR)

**TYPE OF COURSE** : Teacher Education Certificate Course **COURSE DURATION** : 8 weeks (Aug 13 to Oct 08, 2018)  
**INTENDED AUDIENCE** : PG Engineering Students/Teachers **EXAM DATE** : December 2018  
 working in Polytechnic/Engineering **NO OF CREDITS** : 3  
 Colleges/Universities with minimum Qualification PG – All Science/Engineering/Technology Disciplines  
 (M.Sc/M.E/M.Tech/M.S (By research))

**PRE-REQUISITES** : Preferably Undergone Training in Pedagogy

### OBJECTIVE OF COURSE

Engineering practice and its related technologies have become global in scope and scale. To be effective, today's engineering graduate must not only be grounded in scientific and mathematical fundamentals, engineering principles and design, but must also have a global outlook and the broader skills to work in society in both home country and internationally. The quality issues of technical education system are required to be identified and strategies for application of principles of TQM, Re-engineering and Benchmarking be considered. This course is meant to senior teachers who are working in Polytechnic and Engineering colleges who are involved in quality assurance and accreditation process.



### LEARNING OUTCOME

Improving quality Education in Engineering education. Develop different strategies to enhance the quality of education. Applying outcome Based learning and assessment systems.

### COURSE PLAN

**Week 1:** Quality Assurance in Engineering Education-Overview (Introduction), Module1: Strategic Planning- Functions of Education Management

**Week 2:** Module1: Institutional Vision Mission and Mandate, Steps involved in strategic planning process, Work Plan Action Plan, Leadership qualities, Autonomy, Internal Revenue Generation and Utilization, Academic Performance Indicators

**Week 3:** Module 2: Institutional Development- Institutional development Models, Centre of Excellence

**Week 4:** Module 2: Industry Institution community partnership models, Industrial Consultancy, Research and Development

**Week 5:** Module 3: Total Quality Management in Engineering Education- Leadership, Concepts of Quality Management, QMS/QC Tools, Assessment of Quality, Application of TQM in Engineering Education

**Week 6:** Module 4: Educational Project Management-Project Management Principles, PERT/CPM, Applications of Network Techniques, Time analysis, Cost Planning and Control, Cost Tradeoff- Resource Planning and Monitoring, Project management software packages

**Week 7:** Module 5: Outcome Based Education & Accreditation- Overview of OBE & Accreditation, Course Outcome, Programme Educational Objectives, Mapping of Course outcome - Programme outcome

**Week 8:** Module 5: Assessment of Attainment of PEO.PO & CO, Accreditation Criteria & Parameters, SAR Preparations.

### ABOUT INSTRUCTOR

Prof. Dr. E.S.M .Suresh is working as Professor and Head of Civil Engineering at National Institute of Technical Teachers Training and Research , Chennai, India (MHRD, Govt. of India). He has got 28 years of experience in Teaching and Research. He is conducting Faculty Training Programs for Polytechnic and Engineering College Teachers. He has completed more than 400 training for Polytechnic/Engineering College faculty. He has conducted more than 10 International Training Programs. He is guiding Ph.D Scholars in the area of Engineering Education and Civil Engineering. (6 got Awarded and 5 more are working under his guideship). He is the Expert Member of National Board of Accreditation and evaluated the Civil Engineering Programs at Diploma, Degree and Post Graduate level. He has been recognized as an expert by UNESCO Bangkok on MOOCs in Higher Education. He has visited countries viz. USA, The Netherlands, Germany, France, Belgium, Singapore, Malaysia and China.





## PROF. S. DHANAPAL

Professor & Head, (Retd), Centre for Curriculum Development, National Institute Of Technical Teachers Training & Research. (NITTR)

**TYPE OF COURSE** : Teachers Training Certificate Course    **COURSE DURATION** : 8 weeks (24<sup>th</sup> Sep to 16<sup>th</sup> Nov, 2018)  
**INTENDED AUDIENCE** : Faculty members of Technical Institutions    **EXAM DATE** : 24<sup>th</sup> November, 2018  
**PRE-REQUISITES** : Reasonable knowledge of the student services, industry partnership, Institutional organization, accreditation requirements and achievements of one's own institution    **NO OF CREDITS** : 3

### OBJECTIVE OF COURSE

Strategic Planning helps a technical institution to proactively shape its future and determine the path and milestones that determine actual performance. In the bottom-up approach the teachers and staff of the institution take the responsibility of developing and managing the strategic plan. This course has the objective of providing the teachers with the knowledge and skills needed for developing a strategic plan, particularly the need for a plan, developing vision and mission statements, SWOT analysis, identifying thrust areas and objectives, developing work plan and action plan and carrying out the strategic plan (strategic management).



### LEARNING OUTCOME

- Initiate the strategic planning process for the institution
- Clarify the mandate of the organisation
- Develop Vision and Mission statements.
- Conduct SWOT analysis for the institute
- Identify Thrust Areas which are the strategic directions of the institute
- Develop Work Plan and Action Plans for implementing the Thrust Areas
- Implement the strategic plan for the institution
- Monitor the implementation and evaluate the results achieved
- Revise the strategic plan

### COURSE PLAN

**Week 1:** Module 1: Strategic Planning, need, Module 2: Reasons for strategic planning, Module 3: Alternatives for strategic planning, Assignment: Identify the need for Strategic Planning for your institution

**Week 2:** Module 1: Decision on strategic planning, Module 2: Strategic planning group, Module 3: Training members of the group, Assignment: Exercise on steps in developing strategic planning

**Week 3:** Module 1: Defining mandate, Module 2: Clarifying mandate for an organisation, Assignment: Develop the Mandate for an institution

**Week 4:** Module 1: Components and attributes of Vision and Mission statements for an institution, Module 2: Developing vision and mission statements, Assignment: Develop Vision and Mission statements for your organisation consistent with Mandate

**Week 5:** Module 1: Components Purpose of SWOT analysis, information sources, tool development, Module 2: Data collection and analysis  
 Assignment: 1. Develop tools for SWOT analysis, 2. Carry out SWOT analysis for your organisation Mandate

**Week 6:** Module 1: Identification of thrust areas and prioritising them, Module 2: Identify objectives for thrust areas, Module 3: Write objective statements, Assignment: 1. Identify Thrust areas and Writing objectives

**Week 7:** Module 1: Prepare work plan and develop action plan, Assignment: 1. Preparing Work Plan and Action Plan for your organisation

**Week 8:** Module 1: Identification of Strategic management process, ToR for Strategic Management Group, Module 2: Seven key factors for sustaining the process, Module 3: structures, linkages and procedures for the process, Assignment: 1. Develop ToR for Management Group and develop structures and linkages for the Process

### ABOUT INSTRUCTOR

Extensive experience in developing Strategic Plans for technical education institutions. Carried out Strategic Planning for 15 polytechnics in the North Eastern States under World Bank Assisted Project (Tech Ed III). Part of the expert team for developing Strategic Plan for a leading Engineering College in Tamilnadu. Has trained several teachers in the Strategic Planning process for technical institutions.





## DR. SUNIL DUTT

Professor & Head, Department of Education & Educational Management, National Institute of Technical Teachers Training & Research, Chandigarh

**TYPE OF COURSE** : Teachers Training Certificate Course    **COURSE DURATION** : 8 weeks (15<sup>th</sup> Oct to 07<sup>th</sup> Dec, 2018)  
**INTENDED AUDIENCE** : Teachers working in Educational Institutions and other professionals    **EXAM DATE** : 15<sup>th</sup> December, 2018  
**NO OF CREDITS** : 2  
to enable them develop Self-learning materials in their subjects  
**PRE-REQUISITES** : Teachers working in Technical Institutions with UGC/AICTE prescribed qualifications

### OBJECTIVE OF COURSE

In order that learners learn in their own time and at their own pace with little or no supervision, self-learning materials are designed to facilitate the learning process. Self-directed learning can be challenging, even for the brightest and most motivated students. The course introduces the learner to the need: New challenges and trends; concept of Learning Material and its purposes; essential characteristics of SLMs; general principles of Learning Material Development; process of developing Self Learning Material; structure of Self Learning Materials; producing prototype; validation



### LEARNING OUTCOME

After the course is over, participants will be able to develop self-learning material (both print and computer Assisted) on any topic of their choice in their areas of specialization.

### COURSE PLAN

- Week 01:** Self Learning Material – Need, New Challenges & Trends, concept, Characteristics & Types
- Week 02:** Systematic Approach to Instructional Design – Steps, Task Analysis and Learning Outcomes
- Week 03:** Principles and Process of Development of Self Learning Material
- Week 04:** e-content Generation and Integration of Graphics in Self Learning Material
- Week 05:** Computer Assisted Instruction-Design & Development
- Week 06:** Self Learning Material – Content Organization & Presentation
- Week 07:** Quality Assurance and Intellectual Property Rights
- Week 08:** Validation – Its need and methodology; Responsibility and Obligations

Total duration of the course is 20 hours. Each week contains videos (2 to 6; each of about 10 minutes duration), e-content, Discussion forums/quizzes/Assignment and time for studying web link resources

### ABOUT INSTRUCTOR

Dr. Sunil Dutt is presently Professor & Head, Department of Education and Educational Management at National Institute of Technical Teachers Training & Research, Chandigarh. He holds M.Sc. (Hons) Chemistry; M.Ed. and Ph.D. (Education). He has about 2 and half years industrial and 33 years of teaching and research experience. His areas of specialization include Educational Technology, Research Methodology, Guidance & Counselling, Measurement & Evaluation and Educational Management. He has guided 34 Ph.D. dissertations and contributed 59 research publications in International & National Journals and published six text books. He has coordinated about 275 short term courses and taught subjects like 'Research Methodology', 'HRD & Training Methods', 'Education Project Planning & Management', 'Psychology of Adult Learning' and 'Principles of Management'. He has developed 03 video films, 18 CAI packages/self-learning material; Coordinated 12 Research & Development studies; coordinated testing services/activities under IRG etc.



**DR. RAJESH KUMAR DIXIT**

Professor, Department of Civil and Environmental Engineering,  
NITTR Bhopal

**TYPE OF COURSE** : Teacher Education certificate course **COURSE DURATION** : 8 weeks (30<sup>th</sup> July to 21<sup>st</sup> Sept, 2018)  
**INTENDED AUDIENCE** : Teachers of engineering colleges. **EXAM DATE** : There is no final examination in this MOOC  
**NO OF CREDITS** : 3

**OBJECTIVE OF COURSE**

To prepare the participants (means teachers or potential teachers of engineering colleges) to:

- Design (redesign) the undergraduate engineering programme in line with outcome based accreditation based on NBA criteria.
- Implement and evaluate undergraduate engineering programme in line with outcome based accreditation based on NBA criteria.
- Identify and collect appropriate data for various criteria.
- Prepare the self assessment report (SAR) for undergraduate engineering programmes.
- Face the NBA evaluation team.
- Prepare response/ documents for post visit activities.

**LEARNING OUTCOME**

This course on accreditation will prepare the participants to take up accreditation related activities for undergraduate engineering programmes including preparing Self-Assessment Report.

**COURSE PLAN****Week 1:**

Module 1: Introduction to accreditation  
 Module 2: Outcome based Education

**Week 2:**

Module 3: Vision, Mission and PEOs  
 Module 4: POs and PSOs

**Week 3:**

Module 5: Course Outcomes and Mapping with POs and PSOs  
 Module 6: Curriculum structure, Curriculum gap and Content beyond syllabus

**Week 4:**

Module 7: Teaching learning processes  
 Module 8: Attainment of POs, PSOs and Cos

**Week 5:**

Module 9: Criteria related to students : Students' Performance  
 Module 10 : Criteria related to faculty : Faculty Information and Contributions

**Week 6:**

Module 11: Facilities and Technical Support  
 Module 12: Continuous Improvement  
 Module 13: First Year Academics

**Week 7:**

Module 14: Student Support Systems  
 Module 15: Governance, Institutional Support and Finances

**Week 8:**

Module 16: Applying for Accreditation and Visit  
 Module 17: Problem Solving: Difficulties Encountered

**ABOUT INSTRUCTOR**

Prof.R.K.Dixit is currently working as Professor in the Department of Civil and Environmental Engineering at National Institute of Technical Teachers' Training and Research, Bhopal. He is having 33 years of experience in training, education, research, industry, consultancy and extension activities. He has published more than 50 research papers. He has conducted more than 50 visits for accreditation of under-graduate and post graduate engineering programmes as well as diploma (engineering) programmes as a chairman and an expert-member. He has been consultant, the World Bank, The Govt. of Madagascar, National Project Implementation Unit and various state governments for technical education.





## PROF. JOSHUA EARNEST

Professor, Department of Civil and Environmental Engineering,  
NITTR Bhopal

**TYPE OF COURSE** : Teacher Education Certificate Course **COURSE DURATION** : 4 weeks (Aug 13 to Sept 10, 2018.)  
**INTENDED AUDIENCE** : The course is mainly intended for those technical teachers who are interested in understanding or developing engineering education curricula. Teachers could be of any discipline..  
**EXAM DATE** : September 2018  
**NO OF CREDITS** : 2

**PRE-REQUISITES** : Any engineering, pharmacy or architectural graduate.

### OBJECTIVE OF COURSE

Comprehend different types of curriculum approaches to plan to design of relevant outcome-based engineering curricula of technical education programmes to fulfill the need of the industry/society by comprehending.

### LEARNING OUTCOME

- Select the relevant approach(s) for the developing curriculum for the given occupation.
- Evolve the activities of the different stages for developing the given curriculum.
- Design relevant need identification tools for different technical occupations.
- Evolve relevant curriculum designs for an outcome-based curriculum (OBC).



### COURSE PLAN

#### Week-1

**Learning Outcome:** Select the relevant approach(s) for the developing curriculum for the given occupation

#### Week-2

**Learning Outcome:** Evolve the activities of the different stages for developing the given curriculum

#### Week-3

**Learning Outcome:** Design relevant need identification tools for different technical occupations

#### Week-4

**Learning Outcome:** Evolve relevant curriculum designs for an outcome-based curriculum (OBC)

### ABOUT INSTRUCTOR

Prof. Joshua Earnest is currently working as Professor in National Institute of Technical Teachers Training and Research (NITTR), Bhopal. He is having an industrial experience of about 6 years and 31 years of experience in education, teaching, training, research, consultancy and research. He has published 2 technology books one targeted for the industry and other for the university system. 1 book related to curriculum development along with Prof. B. L. Gupta, and 2 modules related to engineering education along with other co-faculty of NITTR Bhopal. He has published several international papers related to engineering education over the past several years. Prof. Joshua Earnest is B. Sc (Engg). in Electrical Engineering, an M.Tech. in Heavy Electrical Equipment, M. Tech Ed., and a Ph. D. in Technical Education.



**PROF. B. L. GUPTA**

Professor, Department of Management and Dean Academics and Research  
National Institute of Technical Teachers' Training and Research,  
Bhopal

<b>TYPE OF COURSE</b>	: Certificate	<b>COURSE DURATION</b>	: 8 weeks (August 13 to October 08, 2018)
<b>INTENDED AUDIENCE</b>	: Since it is teacher training programme so teachers of Polytechnics	<b>EXAM DATE</b>	: November 2018
		<b>NO OF CREDITS</b>	: 3

**PRE-REQUISITES** : Pre-requisites of the course. Any teacher or potential teacher of polytechnics may enrol for the programme

**OBJECTIVE OF COURSE**

To prepare the participants (means teachers or potential teachers of polytechnics) to:

- Make preparation to satisfy requirements of NBA criteria
- Prepare the self assessment report for Diploma engineering programmes.
- Facilitate on site evaluation by NBA evaluation team

**COURSE PLAN****Week 01:-**

Module 1 Overview of NBA

**Week 02 :**

Module 2 Vision, mission and Programme educational objectives

**Week 03 :**

Module 3 Programme curriculum and teaching learning process

**Week 04 :**

Module 3 Programme curriculum and teaching learning process

**Week 05 :**

Module 4 Course outcomes and outcomes

**Week 06 :**

Module 5 students' Performance

Module 6 Faculty information and Contribution

Module 7 Faculty and technical support

**Week 07 :**

Module 8 Continuous improvement

Module 9 Student Support System

Module 10 Governance, institutional support and financial resources

**Week 08 :**

Module 11 Documentation for accreditation

Module 12 Preparation for obtaining NBA

Module 13 Preparation for NBA Evaluation team visit

Module 14 Facilitating on site visit of NBA evaluation team

**ABOUT INSTRUCTOR**

Prof. B. L. Gupta is currently working as Professor in Department of Management, National Institute of Technical Teachers' Training and Research, Bhopal. He is also holding the post of Dean Academics and Research. He is having 35 years of experience in education, teaching, training, consultancy, extension and research. He has published 22 reference books and more than 60 research papers. Prof. Gupta has conducted more than 70 training programmes on accreditation. Prof. B. L. Gupta is B. E. Civil, LL. B., M. Tech Ed., Ph. D. in Technical Education, MBA in Human resource management, PG Diploma in marketing, and PG Diploma in Operation Management.



**DR. D. SINGH KARAULIA**

Professor of Computer Science, National Institute of Technical  
Teacher's Training and Research, Bhopal

<b>TYPE OF COURSE</b>	: Teacher Education Certificate Course	<b>COURSE DURATION</b>	: 4 weeks (15 <sup>th</sup> Oct to 14 <sup>th</sup> Nov, 2018)
<b>INTENDED AUDIENCE</b>	: PG / Faculty teaching PG engineering programme	<b>EXAM DATE</b>	: 17th November, 2018
<b>PRE-REQUISITES</b>	: Faculty Training on "Accreditation of UG Programmes" Conducted by NITTRs – preferable but not necessary		
		<b>NO OF CREDITS</b>	: 2

**OBJECTIVE OF COURSE**

After completion of this course participants will be able to fill up the Self Appraisal Report (SAR) of PG engineering programme for NBA accreditation

**LEARNING OUTCOME**

- Articulate curriculum development aspects, PEOs, POs, and COs
- Design Course Articulation Matrix, and assess attainment of POs
- Compile student's data and faculty contribution records
- Document laboratories & research facilities
- Record evidence based continuous improvement

**COURSE PLAN****Week 1:**

Significance of Accreditation, OBA, Accreditation process, pre-qualifier, premise & criteria of accreditation, basic institutional information, articulating vision, mission and PEOs, programme curriculum, teaching & learning processes.

**Week 2:**

Articulating Program Outcomes (POs), Course Outcomes (COs), and designing a Course Articulation Matrix, attainment of Programme Outcomes.

**Week 3:**

Compiling admitted students & successfully graduated student's data, success rate, professional activities, and faculty contributions.

**Week 4:**

Laboratories & research facilities; continuous improvement.

**ABOUT INSTRUCTOR**

A Professor at NITTR, Bhopal experienced in training, education, research, consultancy & extension activities, and served as programme evaluator as member of NBA Expert Committees.



**DR. RANJAN DASGUPTA**

Professor, Department of Computer Science and Engineering, NITTR, Kolkata

**RAJEEV CHATTERJEE**

Assistant Professor, Department of Computer Science and Engineering, NITTR, Kolkata

**TYPE OF COURSE** : Teacher Certificate Course

**INTENDED AUDIENCE** : Faculty members of Technical Institution

**PRE-REQUISITES** : Faculty members should have exposure in various web-based application and interest in distance mode of Teaching-learning system.

**COURSE DURATION** : 12 weeks (27<sup>th</sup> August to 16<sup>th</sup> Nov, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

### OBJECTIVE OF COURSE

Learning Management System (LMS) is a course that will empower the teachers of the higher education to develop their courses in the e-learning platform. This will also aware them of the various features available in the LMS. After going through the course learners' will be able to:

- Explain the concept e-learning
- Demonstrate the fundamentals of Learning Management System
- Explain various learning methods, learning approaches, learning styles
- Demonstrate content development using standards such as SCORM and LTSA
- Explain internet technology, social media
- Use of ADDIE model for e-content development based on MOODLE platform
- Explain Security and plagiarism related to LMS



### LEARNING OUTCOME

The SWAYAM/MOOC course on Learning Management System (LMS) is a first-hand experience for the teachers of the higher education institutes especially those related the technical domain. The course will demonstrate the various terminologies related to the domain of e-learning or Technology Enabled Learning (TEL). Apart from this the learner will be able to develop a learning content related to a course of particular domain using the state of art technology and standards available on SWAYAM/MOOC platform.

### COURSE PLAN

**Week 01:-** E-learning Fundamentals

**Week 02:-** LMS fundamentals, Major features of LMS

**Week 03:-** Learning methods, Learning Domains, Learning Approach, Types of learning, Adult learning approach

**Week 04:-** SCORM and LTSA

**Week 05:-** Internet Technology

**Week 06:-** Technology and use, Social Media

**Week 07:-** Learning 2.0, LMS more than content delivery

**Week 08:-** LMS Design issues, MOODLE, ADDIE model

**Week 09:-** Security and LMS

**Week 10:-** Plagiarism and LMS

**Week 11-12:-** Preparing faculty for LMS/ SWAYAM use.

### ABOUT INSTRUCTOR

**Dr. Ranjan Dasgupta**, Professor, Department of Computer Science and Engineering is working at NITTR, Kolkata for more than 25 years and is actively engaged in various teaching learning process. He has coordinated more than 200 training programs on Database Management System(DBMS), Webpage Design, Software Engineering and allied areas. His research interest includes Cloud computing, e-learning, Software engineering.

**Rajeev Chatterjee**, Assistant Professor, Department of Computer Science and Engineering is working at NITTR, Kolkata for near about 18 years and is actively engaged in the domain of Technology Enabled Learning (TEL), Confidence Based Learning (CBL), IT infrastructure development, Computer Network etc. He has coordinated more than 150 training programs on IP based networking, e-learning, e-content development and IT infrastructure development.







**DR. DIPANKAR BOSE**

Professor, Department of Mechanical Engineering, National Institute of Technical Teachers' Training and Research, Kolkata



**DR. SAMIRAN MANDAL**

Professor, Department of Mechanical Engineering, National Institute of Technical Teachers' Training and Research, Kolkata



**DR. SUBRATA MONDAL**

Assistant Professor, Department of Mechanical Engineering, National Institute of Technical Teachers' Training and Research, Kolkata

**TYPE OF COURSE** : Teacher Certificate Course  
**INTENDED AUDIENCE** : Faculty members of Technical Institution

**COURSE DURATION** : 8 weeks (23 Aug to 21 Sep, 2018)

**EXAM DATE** : November 2018

**NO OF CREDITS** : 2

**PRE-REQUISITES** : Any teacher or potential teacher of technical institution may enrol for the programme

## OBJECTIVE OF COURSE

After successful completion of the course the participants will be able to

- To explore methodology of laboratory/workshop learning
- To explore various aspects of training for instructors, and management issues
- To explore safety management for laboratory/workshop

## LEARNING OUTCOME

### Module 1

1. Explain aims of laboratory and workshop classes, 2. Describe the purpose and nature of activities in laboratory and workshop.

### Module 2

1. Explain the steps in planning a laboratory class, 2. Develop expected outcomes of laboratory class, 3. Prepare instruction sheet for laboratory class, 4. Develop lesson plan for a laboratory class, 5. Explain the steps for conducting a laboratory class, 6. Plan the demonstration of a laboratory class, 7. Guide the students to conduct/perform experiment/job in laboratory/ workshop

### Module 3

1. Explain the nature of performance based assessment, 2. Describe the main steps of performance based assessment, 3. Explain the basis of performance based assessment, 4. Explain the common methods of observing, recording and scoring, 5. Develop rubrics for performance based assessment in laboratory

### Module 4

1. Explain non-motivational issues of the students in attending practice classes, 2. Know the steps for encouragement of motivation in laboratory works to the students, 3. Explain role of instructors in managing practice classes, 4. Describe the various aspects of management of manpower (technical staff) and students, 5. Plan management of machines/equipment and consumables

### Module 5

1. Discuss various common hazards in laboratory/workshop

### Module 6

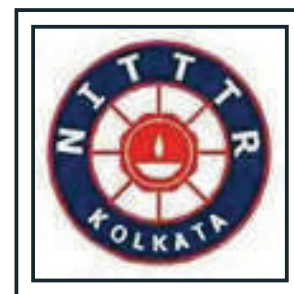
1. Describe overall safety management issues to be followed in conducting laboratory and workshop activities. 2. Describe the details of protective equipment required for safety management in laboratory and workshop. 3. Explain various safe operating procedures to be followed for safety aspects of laboratory/workshop users.

### Module 7

1. Explain objectives of training, 2. Know learning methods of training, 3. Plan training strategies of instructors, 4. Explain categorization of instructors for selection of training providers, 5. Know various types of training providers.

### Module 8

1. Describe the details of wastes produced in conducting laboratory and workshop classes. 2. Explain different methodologies in managing waste in laboratory and workshops.



## COURSE PLAN

**Week 1-** Introduction (aims of laboratory and workshop classes), the purpose and nature of activities in laboratory and workshop.

**Week 2-** Nature of learning process in laboratory and workshop, methodology of laboratory and workshop learning.

**Week 3 -**Basis of evaluation in laboratory and workshop, and various parameters for the performance assessment of laboratory and workshop classes.

**Week 4 -** Management issues such as management of classroom, manpower, resources.

**Week 5 -** Common hazards in laboratory and workshops.

**Week 6 -** Safety management in laboratory and workshops, personal protective equipment etc.

**Week 7 -** Training aspects of Laboratory instructors.

**Week 8 -**Waste management in laboratories and workshops, common violations in waste management in laboratory/workshop

## ABOUT INSTRUCTOR

**Dr. Dipankar Bose**, Professor, Department of Mechanical Engineering, at National Institute of Technical Teachers' Training and Research, Kolkata has been working in the domain of Manufacturing Technology, Fluid Mechanics and Pedagogical Aspects of Laboratory Teaching. He has coordinated more than 100 training programs on Mechanical Engineering discipline and Engineering Education.

**Dr. Samiran Mandal**, Professor, Department of Mechanical Engineering, at National Institute of Technical Teachers' Training and Research, Kolkata has been working in the domain of Manufacturing Technology, Product Design, Robotics and Research Methodology. He has coordinated more than 150 training programs on Manufacturing Technology and Teaching Learning Systems.

**Dr. Subrata Mondal**, Assistant Professor, Department of Mechanical Engineering at National Institute of Technical Teachers' Training and Research, Kolkata has been working in the domain of Advanced Applications of Material Science & Engineering, Biomaterials, Water Treatment and Safety Aspects of Laboratory. He has coordinated training programs on Material Science, Nanotechnology, Water Treatment, Safety Management of Laboratory etc.



**DR. KIRAN SAKSENA**

Professor and Ex-Head, Department of Education & Research,  
N.I.T.T.R. Bhopal.

<b>TYPE OF COURSE</b>	: Teacher Training Certificate Course	<b>COURSE DURATION</b>	: 4 weeks (15 <sup>th</sup> Oct 2018 to 12 <sup>th</sup> Nov 2018)
<b>INTENDED AUDIENCE</b>	: UG/PG/Diploma/Certificate/School Practising / Potential technical teachers	<b>EXAM DATE</b>	: December 2018
		<b>NO OF CREDITS</b>	: 2

**OBJECTIVE OF COURSE**

The course is intended to enable the practicing and probable teachers to:

- Appreciate the process of learning from different perspectives and apply the principles of learning to enhance the effectiveness of learning and instruction.
- Support to achieve the intended learning outcomes at different taxonomic levels in cognitive, affective and psycho-motor domains.
- Design the instructional process to achieve intended learning outcomes

**LEARNING OUTCOME**

The course will enable the teachers to:

1. Explain the process of learning from different perspectives.
2. Suggest the activities for classroom/ Lab instruction sessions in view of principles of learning derived from different perspectives.
3. Manage variables affecting the process of learning to enhance its effectiveness
4. Use inventories / tools to identify the individual differences among learners.
5. Suggest strategies to address individual differences among learners
6. Formulate learning outcomes at different taxonomic levels in Cognitive, Affective and Psychomotor domains.
7. Design learning and instruction events as per Gagne's nine events
8. Prepare an instructional plan based on events

**COURSE PLAN****Week 01:**

Unit One: Human Learning: An Overview: Process and Principles of Human Learning as derived from different perspectives: Behaviourism, Cognitivism, Constructivism, Social Learning., Experiential Learning, Action Learning and Collaborative Learning

**Week 02:**

Variables Affecting Human Learning, Inventories/tools to assess identified variables and Learning styles of students

**Week 03:**

Domains of Learning- Domains of learning, Four pillars of learning and Taxonomic level in Cognitive, Affective and Psychomotor Domain.

**Week 04:**

Instruction: Process of learning and Instruction, Instructional events by Robert M Gange

**ABOUT INSTRUCTOR**

Dr. Kiran Saxena is a Professor and senior faculty member and has more than 33 years of experience of designing and conducting training programmes for technical teachers, developing learning resources, conducting research for systemic development, handling national and international consultancy projects. She has guided research studies at postgraduate and doctorate level, presented / published more than 35 research papers in many national and International Seminars. She is internationally trained in countries like U.K., Philippines and U.S.A. (1999) in specialized areas and skills. She is a practising counsellor and an excellent soft skills trainer. Prof. Kiran Saxena is Ph.D. (Education), M.Ed., M.A. (Applied Psychology) (University Gold Medalist) and P.G. Diploma in Human Resources Management (IGNOU).





## Diploma & Certificate Courses



MHRD



# Diploma & Certificate Courses

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### PROF. UMA KANJILAL

Professor and Head Faculty of Library and Information Science and presently Director of Inter University Consortium of Technology Enabled Flexible Education (IUC-TEFED) in the Indira Gandhi National Open University (IGNOU), New Delhi

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : Certificate

**COURSE DURATION** : 6 months (July 1, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Passed 10 + 2 with Library & Information Science qualification atleast at Certificate level.

#### OBJECTIVE OF COURSE

This course introduces the concepts of library automation and digitisation. It aims to train the learners on open source library automation software Koha and digital library software DSpace.

#### LEARNING OUTCOME

After going through this course the learner will get a thorough understanding of an automated library system, automation processes and the use of open source Integrated Library System software like Koha. They will also know about different types of resources available in Libraries and their preservation aspects. They will get familiarised with the digitisation process and learn to use Open Source DSpace software for developing digital libraries and repositories.



#### COURSE PLAN

Block 1: Library Automation Packages

- Unit 1: Introduction
- Unit 2: Acquisition and Cataloguing
- Unit 3: Serials Control
- Unit 4: Library Services

Block 2: Media Resources

- Unit 6: Media Resources for Libraries and their Preservation
- Unit 7: Equipment and their Maintenance

Block 3: Digitisation of Media Resources

- Unit 8: Digitisation Concept and Need
- Unit 9: Methods and Equipment

#### ABOUT INSTRUCTOR

Prof. Uma Kanjilal has more than 28 years of experience in the Open and Distance Learning System. She is one of the National Coordinators of SWAYAM (India MOOCs) and SWAYAM PRABHA. She is a PI of the National Virtual Library of India Project of Ministry of Culture. Her specializations include e-learning, multimedia courseware development, ICT applications in Libraries and Digital Libraries. She was a Fulbright Scholar in University of Illinois, Urbana Champaign in 1999-2000 where she worked on Multimedia courseware development.





## DR. V. V. SUBRAHMANYAM

Associate Professor and Director in the School of Computer and Information Sciences (SOCIS), IGNOU, New Delhi.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : Certificate

**COURSE DURATION** : 12 weeks (July 1, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Passed 10 + 2 with Library & Information Science qualification at least at Certificate level.

### OBJECTIVE OF COURSE

By the end of the course, students will be able to: 1. Understand the Database concepts, elements of DBMS and Database Models 2. Review and articulate database functions and data modelling in LIS environment 3. Describe various File Organisation Techniques and Search Strategies 4. Understand the Relational Model and able to create conceptual design diagrams using Entity Relationship Modelling 5. Identify the concerns of Indexing 6. Use Structured Query Language to retrieve and manage information 7. Work with MySQL – RDBMS, executing all of its SQL commands 8. Identify basic concerns regarding Database Recovery, Transaction Management, Concurrency control and Deadlocks. 9. Access and use WINISIS 10. Understand the emerging trends namely Open Access Database Services, Text Retrieval Engines, Multilingual Text Retrieval, Data Mashup and Linked Open Data for Libraries.



### COURSE PLAN

- |  |  |
|--|--|
| 1. DBMS–Introductory Concepts                                | 17. Use of Content Designators in WINISIS          |
| 2. Elements of DBMS  | 18. Common Communication Format (CCF) in WINISIS   |
| 3. Types of Databases and Data Models                        | 19. Steps in Developing Databases in WINISIS       |
| 4. Relational Databases and Overview of DB Design            | 20. Steps in WINISIS: FDT and Worksheet            |
| 5. Various Key Constraints in RDBMS                          | 21. Steps in WINISIS: Pickup Lists in Worksheet    |
| 6. Anomalies and Normalization                               | 22. Steps in WINISIS: Basic Formatting Language    |
| 7. File Organization   | 23. Steps in WINISIS: Advanced Formatting Language |
| 8. Search Strategy   | 24. Steps in WINISIS: Field Selection Table (FST)  |
| 9. Content Organisation and Formats                          | 25. Data Entry and Data Export/Import in WINISIS   |
| 10. Indexing and Indexing Tools                              | 26. Searching and Browsing in WINISIS              |
| 11. Types of SQL Commands and Introduction to MySQL          | 27. Utilities in WINISIS                           |
| 12. MySQL Commands   | 28. CDS/ISIS Software Family                       |
| 13. Database Recovery  | 29. Textual Databases Evolution and Evaluation     |
| 14. Transaction Management, Concurrency Control and Deadlock | 30. Introduction to Open Access Database Services  |
| 15. Textual DBMS Major features                              | 31. Text Retrieval Engines                         |
| 16. CDS/ISIS for Windows An Introduction                     | 32. Multilingual Text Retrieval                    |
| 17. Use of Content Designators in WINISIS                    | 33. Data Mashup                                    |
|  | 34. Linked Open Data for Libraries                 |

### ABOUT INSTRUCTOR

Dr. V. V. Subrahmanyam received his *PhD(Computer Science)* from Jamia Milia Islamia (Central University), New Delhi, *M.Tech* (Computer Science and Technology) from Andhra University, Visakhapatnam and *B.Tech* (Computer Science and Engineering) from Nagarjuna University, Guntur. He is faculty in School of Computer and Information Sciences (SOCIS), IGNOU since 1998 and he has over 19+ years of research and teaching experience.



**PROF. JAIDEEP SHARMA**

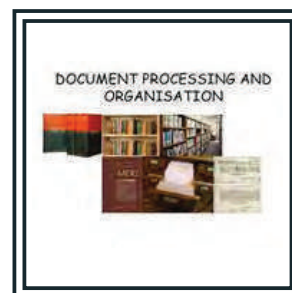
Professor Library and Information Science, IGNOU, New Delhi

**TYPE OF COURSE** : Certificate**INTENDED AUDIENCE** : Certificate**COURSE DURATION** : 12 weeks (July 1, 2018 to Dec 31, 2018)**EXAM DATE** : December 2018**NO OF CREDITS** : 4**PRE-REQUISITES** : Passed 10 + 2**OBJECTIVE OF COURSE**

After going through the Course, the learners will be able to: Appreciate the need and purpose of cataloguing and classification in a library; Understand the process of cataloguing and classification; Know the different types and schemes of classification; Assign class numbers to documents using DDC; Know the different types of catalogues; Prepare catalogue entries using AACR2R; File entries in a catalogue knowing the different rules for filing; and Shelf books and carry out shelf rectification in a library

**LEARNING OUTCOME**

After attending this course, the learner will be able to understand the significance of classification and cataloguing in a library. He will be able to classify and catalogue documents using DDC and AACR- 2R. He will also be able to file entries and shelve books using standard schemes.

**COURSE PLAN**

Block 1: Classification Unit 1: Basics of Classification Unit 2: Classifying Documents using DDC Block 2: Cataloguing Unit 3: Basics of Cataloguing Unit 4: Cataloguing Documents using AACR-2 Block 3: Filing and Shelving Unit 5: Filing Rules Unit 6: Shelving Course- 3 Information Sources and Library Services(BLII-013) Block 1: Information Sources and their use Unit1: Categories of Information sources Unit 2: Types of Information Sources Block 2: Library Services Unit 3: Circulation Services Unit 4: Reference Service Unit5: Awareness Services Unit 6: User Orientation

**ABOUT INSTRUCTOR**

Prof. Jaideep Sharma is a professor in the Faculty of Library and Information Science (LIS). He has a prior experience of working in the face-to-face mode of teaching for 14 years before joining IGNOU in the year 2003. Prof. Sharma has a doctoral degree in the area of Professional Competencies and Education for LIS in India. His area of specialization is Information Processing and Retrieval. Currently, he is also working as University librarian of IGNOU.





## DR. ARCHANA SHUKLA

Assistant Professor, Library and Information Science, IGNOU

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : Certificate

**PRE-REQUISITES** : Passed 10 + 2

**COURSE DURATION** : 12 weeks (July 1, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

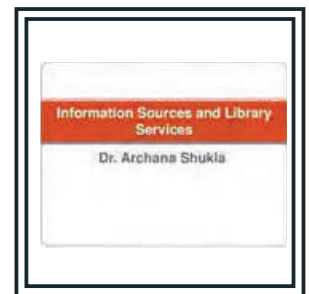
### OBJECTIVE OF COURSE

The course deals with information sources and library services. It gives detailed information about categories of information sources and how to evaluate them.

### LEARNING OUTCOME

After going through this course, you will be able to:

- Explain various types of information sources.
- Categorise them based on different criteria.
- Identify the different types of reference and information sources.
- Understand the basic characteristics and uses of these sources.
- Know about both print and electronic information sources.
- Describe the different types of services provided by Library and Information Centres.



### COURSE PLAN

#### BLOCK 1 : LIBRARIES: BASICS AND CONTEXTS

Unit 1 : Role of Libraries in Society

Unit 2 : Types of Libraries and their Functions

Unit 3 : Functional Units and Operational Aspects

Unit 4 : Library Staff: Role and Responsibilities

#### BLOCK 2 : LIBRARY ROUTINES

Unit 5 : Document Selection and Acquisition

Unit 6 : Physical Processing

Unit 7 : Library Records

Unit 8 : Library Maintenance

### ABOUT INSTRUCTOR

Dr. Archana Shukla, Reader Faculty of Library and Information Science, School of Social Sciences, IGNOU, new Delhi.





**DR. SHACHI SHAH**

Associate Professor in the School of Inter-disciplinary and Transdisciplinary Studies at  
IGNOU, New Delhi.

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : Certificate

**COURSE DURATION** : 12 weeks (July 1, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

**OBJECTIVE OF COURSE**

This course provides an understanding of the concept and principle of biodiversity science. The course provides detailed information on the value and importance of biodiversity, causes as well as current crisis, and consequences of biodiversity loss. The course provides a conceptual understanding of various means of conservation, restoration and sustainable utilization of biodiversity which can provide viable solutions to a range of societal challenges and provides an effective tool to bridge the knowledge gap for sustainable management of biodiversity. The course also explores the linkages between biodiversity conservation, ecosystem services, climate change and sustainable livelihood. The course will also provide insights into current challenges as well as opportunities in the context of various international cooperation and national level programmes and legislative framework for biodiversity conservation. The course also will explore the Inter-linkages of biodiversity and sustainable development goals and the role of biodiversity in supporting the achievement of the Sustainable Development Goals.

**LEARNING OUTCOME**

- To understand the origin of Biodiversity, its values and importance
- To understand the extent of biodiversity threats causes as well as current crisis, and consequences of biodiversity loss
- To assess the linkages between global biodiversity loss and ecosystem services, food security and livelihood in the changing climate
- To provide a conceptual understanding of various means of conservation, restoration and sustainable utilization of biodiversity
- To provide international cooperation and legislative framework for biodiversity conservation
- To explore Inter-linkages of biodiversity and sustainable development goals and the role of biodiversity in supporting the achievement of the Sustainable Development Goals

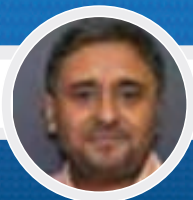
**COURSE PLAN**

**PRELUDE TO BIODIVERSITY** Origin of species, Basic concept of Biodiversity, Value of biodiversity, Ecosystem Services, Biodiversity in India, Forest Biodiversity, Wetland Biodiversity, Extinction of species. **GENETIC RESOURCES** Plant genetic resources, Centres of origin, Agrobiodiversity, Crop Domestication, Animal genetic resources, Fish genetic Resources, Germplasm characterization and evaluation, Food security. **DRIVERS OF BIODIVERSITY LOSS** Direct Drivers of biodiversity loss, Biodiversity hotspots, Climate change and Invasive species as a threat to biodiversity, Threats to biodiversity hotspots in India, Consequences of biodiversity loss. **BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT** Conservation Biology, Germplasm Conservation, In situ and Ex situ conservation, Protected Areas, Ecosystem Approach for Sustainable management, Role of traditional Knowledge in Biodiversity Conservation, Community based ecosystem conservation, Gender and Biodiversity Conservation. **SUSTAINABLE INITIATIVES** International and National instruments to conserve biological diversity, Convention of Biological Diversity, Millennium Developmental Goals, National Biodiversity Act 2002, Governance of biodiversity in India, **BIODIVERSITY AND SUSTAINABLE DEVELOPMENT GOALS** Inter-linkages of biodiversity and sustainable development goals and the role of biodiversity in supporting the achievement of the Sustainable Development Goals

**ABOUT INSTRUCTOR**

Dr. Shachi Shah is Associate Professor in the School of Inter-disciplinary and Transdisciplinary Studies at IGNOU, New Delhi. She attained her Master's in Environmental Science and Ph.D. in Environmental Science from G.B. Pant University of Agriculture and Technology, Pantnagar. She was a Post-Doctoral Research Fellow at G.B. Pant National Institute of Himalayan Environment & Sustainable Development, Almora, India from 2003 to 2004. In 2004, she joined College of Forestry and Hill Agriculture, G.B. Pant University of Agriculture and Technology, Pantnagar as Assistant Professor (Environmental Science). As a faculty member of G.B. Pant University during 2004-11, she taught many courses at graduate level and worked on diversity and biotechnological application of plant growth promoting rhizobacteria of Himalayan Region. She also serves on the Editorial boards of Journal of Environment and Ecology and Indian Journal of Hill Agriculture and reviewer for a number of other National and International journals.



**PROF. M. K. SALOOJA**

Professor & Director, School of Agriculture, Indira Gandhi National  
Open University IGNOU, New Delhi

<b>TYPE OF COURSE</b>	: Diploma	<b>COURSE DURATION</b>	: 12 weeks (July 9, 2018 to Dec 31, 2018)
<b>INTENDED AUDIENCE</b>	: Diploma	<b>EXAM DATE</b>	: December 2018
<b>PRE-REQUISITES</b>	: Graduation/ Post Graduation in Science with Chemistry/ Bio-chemistry or Microbiology as one of the subjects.		
		<b>NO OF CREDITS</b>	: 4

**OBJECTIVE OF COURSE**

The objective of Course “Food Laws and Standards” is to explain participating fellows with the basic aspects of national and international food laws and standards. The course has four major components – (a) Indian Food Regulatory Regime; (b) Global Scenario; (c) Export and Import Laws and (d) Regulations and Other Laws and Standards.

**LEARNING OUTCOME**

•Knowledge on basic aspects of national and international food laws and standards.

**COURSE PLAN****Block-1: Indian Food Regulatory Regime**

Unit-1 Prevention of Foods Adulteration Act Rules  
Unit-2 Foods Safety and Quality Requirements  
Unit-3 Foods Safety and Standard Act, 2006  
Unit-4 Essential Commodities Act, 1955

**Block-2: Global Scenario**

Unit-5 Codex Alimentarius Commission (CAC)  
Unit-6 WTO Implications  
Unit-7 Other International Standards Setting Bodies (e.g. ISO, OIE, IPPC)

**Block-3: Export & Import Laws and Regulations**

Unit-8 FTDR Act, 1992 and Foreign Trade Policy  
Unit-9 Export (Quality Control and Inspection) Act, 1963  
Unit-10 Export Regulations and Promotion Bodies  
Unit-11 Plant and Animal Quarantine  
Unit-12 Customs Act and Import Control Regulations

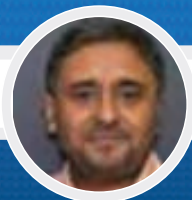
**Block-4: Export & Import Laws and Regulations**

Unit-13 Other Laws Related to Food Products  
Unit-14 Voluntary National Standards: BIS and AGMARK  
Unit-15 National Agencies for Implementation of International Food Laws and Standards Unit-16 Food Labelling

**ABOUT INSTRUCTOR**

Academic experience of more than 33 years in the disciplines of Dairy Technology, Food Safety and Quality Management and Vocational Education. A Dairy Technologist by profession from the National Dairy Research Institute and set to the teaching profession as Assistant Professor in the Dairy Science College, Udaipur. Diversified into educational planning and vocational education by serving as Senior Research Officer in the Planning Commission and Reader in the NCERT, respectively. IGNOU's experience in the open and distance learning is adding new vista to the academic profession. At present, Programme Coordinator for the following IGNOU programmes: 1. Diploma in Dairy Technology; 2. Diploma in Value Added Products from Fruits & Vegetables; 3. Post Graduate Diploma in Food Safety & Quality Management; and 4. Ph.D. in Dairy Science & Technology. Awarded with Commonwealth Scholarship for Post doctorate at CSIRO, Australia and Jawaharlal Nehru Award of ICAR. Always willing to learn.





## PROF. M. K. SALOOJA

Professor & Director, School of Agriculture, Indira Gandhi National Open University IGNOU, New Delhi

<b>TYPE OF COURSE</b>	: Diploma	<b>COURSE DURATION</b>	: 12 weeks (July 9, 2018 to Dec 31, 2018)
<b>INTENDED AUDIENCE</b>	: Diploma	<b>EXAM DATE</b>	: December 2018
<b>PRE-REQUISITES</b>	: Graduation/ Post Graduation in Science with Chemistry/ Bio-chemistry or Microbiology as one of the subjects.	<b>NO OF CREDITS</b>	: 4

### OBJECTIVE OF COURSE

The objective of the Course is to explain participating fellows with the basic composition, standard specification, method of manufacturing, packaging and defects during manufacturing and storage of these products. The course has four major components – (a) Fermented Products; (b) Cheese; (c) Frozen Dairy Products and (d) Dairy By-products. It shall impart knowledge and technical proficiency in manufacture of these products. It shall also facilitate Good Manufacturing Practices in the dairy sector.

### LEARNING OUTCOME

Knowledge on basic aspects of basic composition, standard specification, method of manufacturing, packaging and defects during manufacturing and storage of fermented, cheese, ice-cream and by-products.

### COURSE PLAN

Technology of Fermented, Cheese, Ice-cream and By- products  
 Fermented Dairy Products Manufacture of Shrikhand and yogurt  
 Making of Yogurt  
 Fermented, Commercial Product of Dahi, Lassi and Chhachh  
 Commercial Production of Shrikhand, Mishti dahi and Yougurt  
 Fermented Dairy Product Manufacturing of Indigenous Product  
 Fermented Dairy Products Packaging and Sorage  
 An Introduction to Milk By- Products  
 Casein By- Products  
 Condensed Whey and Whey Powder  
 Application of Membrane Processing in Dairy Industry  
 Ice- Cream and Frozen Desserts: An Introduction  
 Calculation of Ice Cream Mix and Commercial Manufacturing  
 Cheese Starter Cultures  
 Microbiology of cheese

### ABOUT INSTRUCTOR

Academic experience of more than 33 years in the disciplines of Dairy Technology, Food Safety and Quality Management and Vocational Education. A Dairy Technologist by profession from the National Dairy Research Institute and set to the teaching profession as Assistant Professor in the Dairy Science College, Udaipur. Diversified into educational planning and vocational education by serving as Senior Research Officer in the Planning Commission and Reader in the NCERT, respectively. IGNOU's experience in the open and distance learning is adding new vista to the academic profession. At present, Programme Coordinator for the following IGNOU programmes: 1. Diploma in Dairy Technology; 2. Diploma in Value Added Products from Fruits & Vegetables; 3. Post Graduate Diploma in Food Safety & Quality Management; and 4. Ph.D. in Dairy Science & Technology. Awarded with Commonwealth Scholarship for Post doctorate at CSIRO, Australia and Jawaharlal Nehru Award of ICAR. Always willing to learn.



**DR. PRAVEEN JAIN**

Assistant Professor in the School of Agriculture, Indira Gandhi National Open University (IGNOU), New Delhi

**TYPE OF COURSE** : Diploma

**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 20 weeks (July 9, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

**PRE-REQUISITES** : Graduation/ Post Graduation in Science with Chemistry/ Bio-chemistry or Microbiology as one of the subjects.

**OBJECTIVE OF COURSE**

The course describes the various phases of the Indian agriculture development starting from the pre-historic agriculture to the modern agriculture. The course identifies the traditions, belief and agricultural practices followed by Indian farmers. The course explains the scope of Indian agriculture and its contribution in the Indian economy. The status, utilization pattern, problems and development of agricultural resources viz. land, labour, water, biodiversity, livestock and fisheries are covered. Institutional development in agriculture such as cooperatives, farmers' organization, institutional finance, research, education and extension warehousing and storage, public distribution system, etc. are explained along with their importance. Various concepts such as capital formation, agricultural pricing, taxation and subsidies are briefly described along with their importance in agricultural production management. The course talks about the role of food grains procurement, storage, marketing, research and technology transfer in development of Indian agriculture.

**LEARNING OUTCOME**

The learners will recognise the emerging issues and trends in agriculture such as diversification, agriculture industry interface, trade, quality, gender and sustainability, globalization and use of information and communication technology during manufacturing and storage of fermented, cheese, ice-cream and by-products.

**COURSE PLAN**

**Week 1:** Evolution And Scope Of Agriculture

**WEEK 2:** INDIAN FARMERS TRADITIONS, BELIEF AND PRACTICES

**Week 3:** Role of Agriculture in Indian Economy

**Week 4:** Development of Indian Agriculture

**Week 5:** Land Resources and Cropping Pattern

**Week 6:** Biodiversity- Conservation and Utilization

**Week 7:** Growth and Characteristics Of Agricultural Labour

**Week 8:** Livestock and Fisheries Resources In India

**Week 9:** Agricultural Credit, Insurance and Warehousing

**Week 10:** Public Distribution System and Food Security

**Week 11:** Cooperatives, Farmers Organizations and NGOs

**Week 12:** Research, Education and Extension

**Week 13:** Capital Formation, Pricing, Taxation and Subsidies

**Week 14:** Procurement, Storage And Distribution of Foodgrains

**Week 15:** Research and Development and Transfer of Technology

**Week 16:** Agriculture Linkage with other Sub-Systems

**Week 17:** Diversification in Agriculture

**Week 18:** Agriculture Industry Interface

**Week 19:** Issues Related to Trade, Gender and Sustainability

**Week 20:** ICT and Agriculture

**ABOUT INSTRUCTOR**

Dr. Praveen K. Jain, Ph.D. in Agricultural Economics is working as Assistant Professor in the School of Agriculture, Indira Gandhi National Open University (IGNOU), New Delhi since 2006. His areas of interest include e-learning technologies, e-extension, and agriculture education through ODL besides the core areas agricultural policy, agricultural marketing and agribusiness management. He is coordinating distance education programmes in the areas of agricultural policy, plantation management, agribusiness management and agriculture extension. He has more than 35 research papers and 3 books to his credit.



**DR. P VIJAYAKUMAR**

Assistant Professor, School of agriculture, Indira Gandhi National Open University(IGNOU), New Delhi

**TYPE OF COURSE** : Certificate

**INTENDED AUDIENCE** : Certificate

**COURSE DURATION** : 10 weeks (July 9, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 2

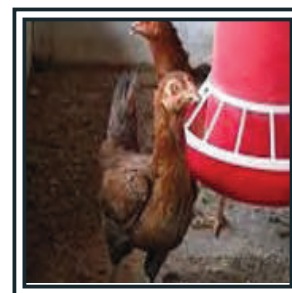
**OBJECTIVE OF COURSE**

The course is designed to acquaint with the status and perspective of Indian Poultry Industry and advantages of rearing poultry.

**LEARNING OUTCOME**

After going through the course the learners will be able to:

- understand various types of poultry farms and farming systems practised in India
- know about the different academic and development institutions involved in the training and extension activities in the poultry sector
- enumerate different government schemes and poultry cooperatives throw light on the common breeds of poultry, different body systems and functions, different breeding systems involved in poultry farming and culling and judging of poultry

**COURSE PLAN**

- Indian Poultry Industry - Brief View
- Indian Poultry Industry - Growing Trends
- Common Technical Terms in Poultry Production
- Poultry Body System and Functions
- Poultry Farming in India
- Poultry Development Programmes in India
- Various Types of Poultry Farms
- Rural Backyard Poultry Farming
- Small Scale Broiler Farming for Meat
- Commercial Intensive Broiler Farming for Meat Production
- Small Scale Layer Farming for Eggs
- Commercial Layer Farming for Eggs
- Duck Farming for Eggs and Meat
- Quail Farming for Eggs and Meat
- Turkey Farming for Eggs and Meat
- Poultry Breeder Farms and Integrated Mixed Farming
- Breeds, Varieties and Strains of Poultry
- Systems of Poultry Breeding
- Culling of Birds for Profitable Poultry Farming
- Judging of Poultry for Better Performance

**ABOUT INSTRUCTOR**

Dr. P. Vijayakumar, Ph.D. in Livestock Production Management (LPM) is working as Assistant Professor in the School of Agriculture, Indira Gandhi National Open University (IGNOU), New Delhi since 2006. His areas of interest include Animal Husbandry, Dairy/Poultry farming, distance education and food safety through ODL. He is coordinating distance education programmes in the areas of Sericulture, Dairy Farming, Poultry Farming and Fish Products Technology. He has published 12 research papers and 3 book chapters in reputed national and international journals and publications.



**DR. G. MYTHILI**

Deputy Director, STRIDE, Indira Gandhi National Open University(IGNOU),  
New Delhi

**TYPE OF COURSE** : Diploma

**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 12 weeks (July 1, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

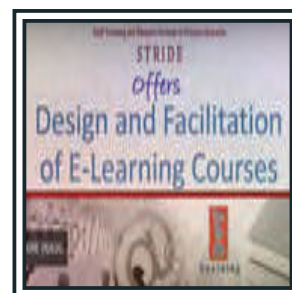
**NO OF CREDITS** : 4

**OBJECTIVE OF COURSE**

Keeping in view the need of the learners, teachers and practitioners of e-learning, this course is planned, designed and developed to acquaint them with the design aspects of Instructional Design.

**LEARNING OUTCOME**

This course describes the foundations, processes, models and theories and instructional design in practice that have evolved from the basic systemic approaches for e-learning environment.

**COURSE PLAN**

Introduction to Open and Distance Learning  
 Understanding Learning and Instructions  
 School of Thoughts Behaviourism (Part-1)  
 School of Thoughts Behaviourism (Part-2)  
 School of Thoughts: Cognitivism  
 Jean Piaget's theory of cognitive  
 Constructivism and Online Learning  
 Connectivism and Digital Learning  
 Cognitive Load Theory  
 Cognitive Flexibility Theory  
 Instructional Design and Online Learning  
 ADDIE Model  
 Dick and Carey Model  
 The Assure Model of Instructional Design  
 Four-Component Instructional Design (4C-ID) Model  
 Assure Model of Instructional Design  
 Understanding Learning and Instruction  
 Collaborative Learning  
 Scenario based Learning  
 Top Down and Bottom Up -Theories and Perspective  
 Problem Based Learning  
 Bloom's Taxonomy and Digital Learning  
 Robert Gange's Learning Outcome  
 Vygotsky\_ Language of Thoughts  
 Jerome S. Bruner on Teaching Learning  
 Learning Objectives  
 Concept Mapping and Digital Learning  
 Concept Mapping - Free Mind  
 Technology Analysis for E-Learning

**ABOUT INSTRUCTOR**

Dr. G. Mythili, BE (Computer Science and Engineering), Master of Science in IT, Master of Arts in Distance Education and Ph.D in Distance Education is Deputy Director in Staff Training and Research Institute of Distance Education, IGNOU. She has contributed towards the development of human and training resources through academic workshops and by developing training materials in IGNOU. She has conducted a number of research individually, and as part of a team during the last 5-6 years and has published articles in referred journals. She is an efficient resource person for training of various kinds with special reference to computer related training on basic computing, multimedia development and online, web-based training (Web 2.0). She is coordinating two online programmes of IGNOU: Academic Counsellors Training–Online and Post Graduate Diploma in E-Learning.





## SHIVAJI BHASKAR

Assistant Professor in Russian at the School of Foreign Languages IGNOU

**TYPE OF COURSE** : Diploma

**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 12 weeks (July 1, 2018 to Dec 31, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

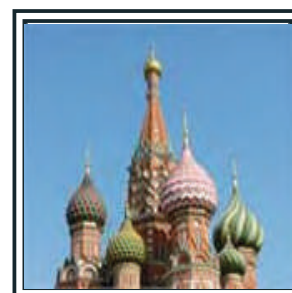
**PRE-REQUISITES** : No formal Education is required, though 10th level of English proficiency is desirable.

### OBJECTIVE OF COURSE

The main objective of the course is to give an opportunity to all those who want to learn Russian.

### LEARNING OUTCOME

- To develop the ability to use Russian effectively for the purpose of practical communication in spoken and written discourse.
- To respond, in written or oral form, quickly, adequately and accurately in different communicative situations (such as- to give & receive personal information, to give basic instructions, to involve in dialogues related to day-to-day life, to relate events, facts and to narrate situations, to express opinions, to describe persons or things, to justify opinions, etc.)
- To demonstrate knowledge of sufficient vocabulary to use with grammar patterns
- To enable students to gain access through language to the contemporary scene and the background of Russian speaking countries, their people and their cultures.
- To establish the skills, language and attitude required to promote and facilitate further study of Russian.



### COURSE PLAN

Origin of the Russian Language

Introduction to the Russian Alphabet

Letters of the Russian Alphabet

Vowels & Consonants

Vowels sounds

Consonant Sounds

Introduction to the Russian Phonetics: Voiced & Voiceless Consonants.

Devoicing of Consonants; Singular & Plural Nouns

Combination of Vowel sounds & Consonant Sounds-

Use of Stress sign and Intonation in Russian

Use of Affirmative and Negative sentences in Russian

Pronouns in Russian

Verb Conjugations

Verb Conjugations

Personal Pronouns

Possessive pronouns

Demonstrative pronouns

•Use of Animate and Inanimate in Russian

•Gender in Russian

Russian Verbs and Their Conjugations

Use of Who and What in Russian

Days of the Week

Months of the Year

Cardinal numbers in Russian

Verbs conjugations in Russian

Dialogs & Texts in Russian

Case System in Russian

Prepositional Case

Use of Noun and Adjective endings in Russian

Use of Questions "Where?" and "Where?" to in Russian

Use of Pronouns in Prepositional Case

Use of Questions "About What" and "About Whom?"

Use of Verbs of Motion in Russian

Use of Verbs of Motion in Russian with Prefixes

Common Phrases, Greetings in Russian and Russian Cuisine.

### ABOUT INSTRUCTOR

Mr. Shivaji Bhaskar is Assistant Professor in Russian at the School of Foreign Languages, IGNOU. His area of special interest is Teaching of Russian as a Foreign Language (PKI), Culture & Civilization of Russia, Translation & Interpretation and Area Studies with special emphasis to Russian and Eurasian Studies.





## DR. MUKESH KUMAR

Assistant Professor in the School of Agriculture, Indira Gandhi National Open University (IGNOU), New Delhi

**TYPE OF COURSE** : Awareness

**INTENDED AUDIENCE** : Neo-literates preferably 8th pass

**PRE-REQUISITES** : Class 8 pass

**COURSE DURATION** : 4 weeks (Sep 5, 2018 to Nov 4, 2018)

**EXAM DATE** : December 2018

**NO OF CREDITS** : 4

### OBJECTIVE OF COURSE

- Sensitize and educate learners about importance of solar energy and its application in agriculture;
- Identify the components solar PV water pumping system;

### LEARNING OUTCOME

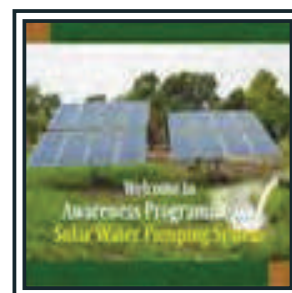
Impart the skills for operation, operation, maintenance and safety in relation to solar PV water pumping system.

### COURSE PLAN

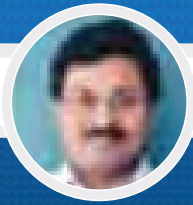
Module-I: Solar Energy and its Application  
 Module-II: Solar Water Pump and its Components  
 Module-III: Operation, Maintenance and Safety

### ABOUT INSTRUCTOR

Dr. Mukesh Kumar is working as Assistant Professor (Stage-3) in School of Agriculture, Indira Gandhi National Open University, New Delhi. He has completed B.Tech. in Agricultural Engineering and Masters in Soil and Water Engineering from Punjab Agricultural University Ludhiana. He received his Ph.D. in Agricultural Engineering with the specialization in Soil and Water Conservation Engineering from Indian Agricultural Research Institute. Dr. Mukesh Kumar has started his Professional career in 2001 at IARI as Research Associate. He has teaching and research experience in the field of drip irrigation, water management and watershed management.





**DR. M. RAJESH**

Regional Director, IGNOU Regional centre, Vatakara, Kerala

**TYPE OF COURSE** : Certificate**INTENDED AUDIENCE** : Certificate**PRE-REQUISITES** : Class 8 pass**COURSE DURATION** : 6 weeks (Oct 1, 2018 to Nov 15, 2018)**EXAM DATE** : December 2018**NO OF CREDITS** : -**OBJECTIVE OF COURSE**

This course is a unique attempt to present environmental issues from the perspective of social and allied sciences.

**LEARNING OUTCOME**

The course has the advantage of leveraging experts from diverse fields such as law, trade, education, sociology, technology, international relations and the like.

**COURSE PLAN**

- Environment and Society - Introduction
- Seminal cases in Environmental Protection
- Environment and the Indian Constitution
- Legal Edifice of Environmental Protection
- Environment Impact Assessment Norms and their Application In India
- The water Act
- The Air Act 1981
- The Gadgil Report on the Western Ghats
- e Wild life Protection Act 1972
- Forest Conversion Act 1980
- The Kasturirangan Report
- Trade and Environment

**ABOUT INSTRUCTOR**

Dr. M.Rajesh, Regional Director, IGNOU Regional centre, Vatakara, Kerala





National Council of Educational  
Research and Training

## School Educational Courses



MHRD



# School Educational Courses

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**PROF. SHIPRA VAIDYA**

Faculty in Department of Education in Social Science,  
NCERT, New Delhi

**FIRST CYCLE : July 9, 2017 To Dec 31, 2017**

<https://swayam.gov.in/course/3845-ncert-accountancy-01-class-11>

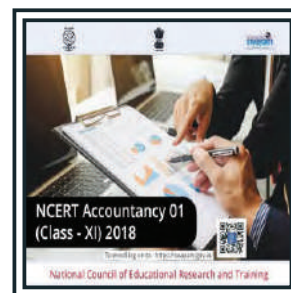
**SECOND CYCLE : June 1, 2018 To Nov 30, 2018**

<https://swayam.gov.in/courses/5044-ncert-accountancy-01-class-xi-2018>

**ABOUT THE COURSE**

An important part of any business organisation is the money that comes in and the money that goes out. Every bit of monetary inflow and outflow needs to be tracked and accounted for.

This course will help the aspiring accountants, like you, to strengthen the conceptual base in accounting through variety of e-resources like video lectures, enrichment materials for supplementing textbooks, self assessment inventory and checklist, external weblinks and many more activities for smooth progression and joyful learning. This is a 6 months course. Each week, one module containing eText, Video tutorial along with Self Assessment and Weblinks for extra study will be released.

**OBJECTIVE**

This course is intended to develop understanding:

1. Systematically recording the accounting transactions, accountants ably determine the longevity, profitability of a business, perform financial forecasts and assess the overall performance of a business enterprise.
2. How can the credibility and usefulness of accounting and financial information be ensured? Or Why accounting and finance are the key elements for a business entity?
3. To understand how accounting operates through Generally Accepted Accounting Principles, accounting standards and structured rules and

**COURSE SCHEDULE****Introduction To Accounting**

Economic events, Summarising, Analysing, Reporting, Financial position, Accounting a source of information, Branches of Accounting, Users of accounting information, Reliability, Relevance, Understandability, Comparability, Assets, Liabilities, Capital, Expense, Income, Expenditure, Revenue, Debtors, Creditors, Goods, Cost, Gain, Stock, Purchase, Sales, Loss, Profit, Voucher, discount, Transaction, Drawings.

**Theory Base of Accounting**

Accounting concepts, Accounting principles, Consistency, Going concern, Accrual, Cost, Conservatism (Prudence), Matching, Money measurement, Accounting Period, Business entity, Dual Aspect, Revenue recognitions, Full Disclosure, Materiality, Objectivity, Double entry system, Single entry system, Accrual basis of accounting, Cash basis of accounting, Accounting standards, IFRS

**Recording of Business Transactions**

Source Documents, Accounting Vouchers, Accounting equation, Impact of Business transactions, Debit, Credit, Rules of Debit and Credit, Analysis of Business transactions, Debit, Credit, Rules of Debit and Credit, Analysis of Business transactions, Cash Book, Types of cash book, Single column Cash book, Double Column Cash book, Three column Cash book, Petty cash book, Contra entry, Imprest system of petty cash book, Special purpose books, Subsidiary books, Purchases book, Sales Book, Purchases Return books, Sales returns book, Journal proper, Ledger, Principal book of Accounting, Balancing of Ledger accounts, Bank Reconciliation Statement, BRS, Reasons of differences between Bank column of Cash book and Pass book

**Trial Balance and Rectification of Errors**

Trial Balance, Compensating Error, Commission, Error of Principle, Error Omission, Trial Balance, Compensating Error, Error of Commission, Error of Principle, Error Omission, Suspense Account,

**Depreciation, Provisions & Reserves**

Source Documents, Depreciation Vouchers, Reserve and Provision, Revenue and Capital Reserve,

**ABOUT INSTRUCTOR**

Dr. Shipra Vaidya is Professor of Commerce in Department of Education in Social Sciences, NCERT, New Delhi. Her area of specialisation includes Accounting, Budgeting and Finance; Business Entrepreneurship and Computerised Accounting System. She is a member coordinator for NCERT's Commerce Curriculum and Textbooks at the higher secondary stage.



**PROF. SUNITA FARKYA**

Faculty in Department of Education in Science and Mathematics, NCERT, New Delhi

**DR. YASH PAUL SHARMA**

Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi

**FIRST CYCLE : Oct 30, 2017 To Apr 30, 2018**

<https://swayam.gov.in/courses/4321-ncert-biology-01-class-11>

**SECOND CYCLE : June 1, 2018 To Nov 30, 2018**

<https://swayam.gov.in/courses/4930-ncert-biology-01-class-xi-2018>

**ABOUT THE COURSE**

Biology is the science of life forms and living processes. The living world comprises a wide diversity of organisms. The observation of the diverse forms of life on earth was made initially through the naked eyes and later by using instruments such as magnifying lenses and microscopes. The organisms were described on the basis of observed structural features, both external and internal. The detailed description of life forms on the basis of appearance external and internal features brought out their concept of diversity. It is the cell theory that emphasised the unity underlying this diversity of forms, i.e., the cellular organisation of all life forms. Cell theory also created a sense of mystery around living phenomena, i.e., physiological and behavioural processes. This mystery was the requirement of integrity of cellular organisation for living phenomena to be demonstrated or observed. This is a 6 months course. Each week, one module containing eText, Video tutorial along with Self Assessment and Weblinks for extra study will be released.

**COURSE SCHEDULE****The Living World**

Biodiversity, Binomial Nomenclature, Taxonomy, Systematics, Species, Genus, Family, Kingdom, Phylum, Class, Order Family, Genus, Species, Herbarium, Monographs

**Biological Classification**

Biological classification, Two Kingdom System Of Classification, Five Kingdom system of Classification, Monera, Protista, Fungi, Animalia, Plantae,

**Plant Kingdom**

Thallophyta, Chlorophyta, Rhodophyta, Phaeophyta, Isogamous, Anisogamous, Eutrophication, Pyrenoids, Phycocolloid, Bryophytes, Rhizoid, Gemma, Protonema, Antheridium, Pteridophyta, Sphenophyta, Gymnosperms, Angiosperms, Cone, Flower, Pollen Grain, Embryo, Monocot, Dicot, Fruit, Cotyledons

**Animal Kingdom**

Biodiversity, classification, Phylum Porifera, Phylum Cnideria, Features of animals as the basis of classification: Grade of organisation, Body plan, Symmetry.

**Morphology of Flowering Plants**

Meristematic tissue, permanent tissue, xylem, phloem, Tissue Systems, Dermal System, Ground Tissue System, Vascular

**Anatomy of Flowering Plants**

Tissue System, Anatomy of stem, Anatomy of roots, Anatomy of leaf, Secondary Vascular Growth, Heart wood and Sap wood, Periderm,

**Structural organisation in Animals Cell: Unit of life**

Cell Theories, Prokaryotic cell, Eukaryotic cell, Cell Components, Cell Processes, Cell Mechanics, Active transport, passive transport, endomembrane system, endoplasmic reticulum, Golgi apparatus, nucleus, chromatin, cytoskeleton, cilia, flagella

**Biomolecule**

Primary Metabolites and Secondary Metabolites, Biomacromolecules, Polysaccharides, Proteins, Nature of bond linking monomers in a polymer, Structure of proteins, Classification of proteins based on structural complexity, Nucleic Acids

**Cell Cycle and Cell division**

Mitosis, Meiosis, cell division

**ABOUT INSTRUCTOR****Sunita Farkya**

Dr. Sunita Farakya is Professor in Department of Education in Science and Mathematics, NCERT, Her area of specialization includes Plant Biotechnology, Biological Control of weeds, Production of Secondary metabolites. She has completed projects named 'Studies on the production of secondary metabolites from plant cell culture' funded by CSIR; 'Study of Post Graduate Teachers' (PGTs) understanding of Plant tissue culture and genetic engineering (Biotechnology) and their application to human welfare'; 'Studies on the production of anti cancer drug in cell and hairy root cultures of Thuja spp.' funded by UGC. She has further worked on Plant tissue culture techniques, Photochemistry, Molecular Biology Techniques, Microbial Techniques, Chromatographic techniques, Electrophoresis techniques, enzyme extraction and activity assay, toxicity studies and many more.

**Dr. Yash Paul Sharma**

Dr. Yash Paul Sharma has worked as Assistant Professor in the Central Institute of Educational Technology, NCERT, New Delhi. With PhD degree in Zoology and one year PostDoc from CSIR, Dr. Sharma has interests in Taxonomy, evolutionary Biology and integrating ICT to teach biological concepts. Dr. Sharma has discovered several new species of ants with co-workers with publications in many international journals of repute.



**DR. C.V. SHIMRAY**

Associate Professor in the Department of Education in Science and Mathematics, NCERT, New Delhi

**DR. YASH PAUL SHARMA**

Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi

**FIRST CYCLE : July 01, 2017 To Dec 31, 2017**  
<https://swayam.gov.in/course/3866-ncert-biology-03-class-12>

**SECOND CYCLE : June 1, 2018 To Nov 30, 2018**  
<https://swayam.gov.in/courses/5042-ncert-biology-03-class-xii-2018>

**ABOUT THE COURSE**

The course is designed for class 12th on NCERT textbook pattern. The course will deal with Reproduction in Organisms, Sexual Reproduction in Flowering plants, Human Reproduction and Reproductive Health from Unit 6. It also deals with Principles of Inheritance and Variation, Molecular Inheritance and Evolution from Unit 7. These chapters are divided into modules as per syllabus and each module will be having eContent file, Video tutorial, Self Assessment questions and Weblinks. Apart from it Transcription of the video will also be provided. This is a 6 months course. Each week, one module containing eText, Video tutorial along with Self Assessment and Weblinks for extra study will be released.

**COURSE SCHEDULE****Reproduction in Organisms**

Reproduction, Life Span, Asexual Reproduction, Sexual Reproduction, clone, Sexual reproduction, Juvenile phase, Vegetative phase, Oestrous cycle, Menstrual Cycle, Gametogenesis, zygote, embryogenesis,

**Sexual Reproduction in Flowering Plants**

Flower, stamen, microsporangium, pollen grain, microsporogenesis, outbreeding devices, pollen-pistil interaction, artificial hybridisation, emasculation, ovule, double fertilisation, triple fusion, apomixis, polyembryony

**Human Reproduction**

Sexual dimorphism, testes, accessory ducts, external genitalia, male germ cells, spermatogenesis, spermiation, seminiferous tubules, Leydig's cells, interstitial cells, Ootid, polar body, Graafian follicles, fallopian tube, mammary glands, corpus luteum, Fertilisation, Zygote, Polar body, cleavage, blastomeres, trophoblast, inner cell mass, placenta, implantation, pregnancy, parturition, lactation, colostrum

**Reproductive Health**

Reproductive health, RCH. AIDS, Sexual diseases, contraceptive methods, reproductive health, test tube baby, infertility, reproductive diseases. Sexually transmitted diseases (STD), medical termination of pregnancy (MTP)

**Principles of Inheritance and Variation**

Gene, Allele, Dominant, Recessive, Homozygous, Heterozygous, Genotype, Phenotype, Punnett's Square, F<sub>1</sub> and F<sub>2</sub> generations or progenies, Gene, Allele, Dominant, Recessive, Homozygous, Heterozygous, Genotype, Phenotype, Punnett's Square, F<sub>1</sub> and F<sub>2</sub> generations or progenies, Pleiotropy, polygenic inheritance, Linkage, Recombination, crossing over, sex determination, Dihybrid cross, Independent assortment, Linkage, recombination, sex chromosomes, autosomes, heterogametic sex, pedigree analysis, aneuploidy and polyploidy.

**Molecular basis of Inheritance**

Nucleoside, nucleotide, phosphodiester linkage, histone octamer, nucleosome, euchromatin, heterochromatin, transforming principle, bacteriophage, RNA world, semi-conservative, point mutation, adapter RNA, charging of t-RNA, translation, untranslated regions, operon, repressor, inducer, DNA, Human Genome Project, DNA fingerprinting

**Evolution**

Big Bang Theory, Nebular Hypothesis, Biopoiesis, Abiogenesis, Biogenesis, Panspermia, Coacervates, Chemical Evolution, Paleontology, Zoogeography, Phytogeography, Vestigial organs, Paleontology, Taxonomy, Biochemistry, Physiology, Biological evolution, Lamarckism, *Dryopithecus*, *Ramapithecus*, *Australopithecus*, *Homo habilis*, *Homo erectus*, *Homo sapiens*, *Neanderthal*, *Cro-Magnon*

**ABOUT INSTRUCTOR****Dr. C. V. Shimray**

Dr. C.V. Shimray is a faculty in Biology in the Department of Education in Science and Mathematics, NCERT, New Delhi. Her area of specialization includes Zoology (Entomology) and Environmental Education. She was a member of the development team for Biology Classes XI and XII Textbooks and Laboratory Manual in Biology for Classes XI and XII.

**Dr. Yash Paul Sharma**

Dr. Yash Paul Sharma has worked as Assistant Professor in the Central Institute of Educational Technology, NCERT, New Delhi. With PhD degree in Zoology and one year PostDoc from CSIR, Dr. Sharma has interests in Taxonomy, evolutionary Biology and integrating ICT to teach biological concepts. Dr. Sharma has discovered several new species of ants with co-workers with publications in many international journals of repute.



**PROF. ALKA MEHROTRA**

Faculty in the Department of Education in Science and Mathematics, NCERT, New Delhi

**DR. AERUM KHAN**

Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi

**PROF. ANJNI KOUL**

Faculty in the Department of Education in Science and Mathematics, NCERT, New Delhi

**FIRST CYCLE : July 8, 2017 To Dec 31, 2017**

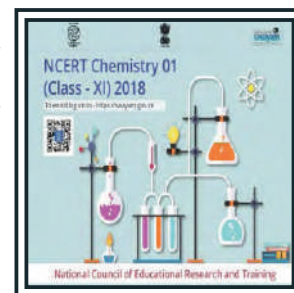
<https://swayam.gov.in/course/3898-ncert-chemistry-01-class-11>

**SECOND CYCLE : June 1, 2018 To Nov 30, 2018**

<https://swayam.gov.in/courses/4931-ncert-chemistry-01-class-xi-2018>

**ABOUT THE COURSE**

The subject of Chemistry is intimately linked to the well-being of human kind. The rate of development in this subject is too high. Keeping this in mind this course is developed, it is intended to cover Some Basic Concepts of Chemistry, Structure of Atom, Classification of Elements and Periodicity in properties, Chemical Bonding and Molecular Structure, States of Matter, Thermodynamics and Equilibrium the following topics for the students of Class XI, Semester 1 specifically, and others interested in general. These chapters are divided into modules as per syllabus and each module will be having eContent, Video tutorial, Self Assessment questions and Weblinks. Apart from it Transcription of the video will also be provided. This is a 6 months course. Each week, one module containing eText, Video tutorial along with Self Assessment and Weblinks for extra study will be released.

**COURSE SCHEDULE**

**Some Basic Concepts of Chemistry :** Importance of Chemistry, Nature of Matter, properties of matter and their measurement, uncertainty in measurement, laws of chemical combinations, Dalton's atomic theory, atomic and molecular masses, mole concept and molar masses, percentage composition, stoichiometry and stoichiometric calculations

**Structure of Atom :** Discovery of sub-atomic Particles, Atomic models, developments leading to Bohr's model of atom, Bohr's model for hydrogen atom, quantum mechanical model of the atom

**Classification of Elements and periodicity in properties :** Need of classifying elements, genesis of periodic classification, modern periodic law and the present form of the periodic table, nomenclature of elements with atomic number >100, Electronic Configurations of Elements and the Periodic Table, Electronic Configurations and Types of Elements, s-, p-, d-, f- Blocks, Periodic Trends in Properties of Elements

**Chemical Bonding and Molecular Structure :** Kössel-Lewis Approach to Chemical Bonding, Ionic or Electrovalent Bond, Bond Parameters, The Valence Shell Electron Pair Repulsion (VSEPR) Theory, Valence Bond Theory, Hybridisation, Molecular Orbital Theory, Bonding in Some Homonuclear Diatomic Molecules, Hydrogen Bonding

**States of Matter :** Intermolecular Forces, Thermal Energy, Intermolecular Forces vs Thermal Interactions, The Gaseous State, The Gas Laws, Ideal Gas Equation, Kinetic Energy and Molecular Speeds, Kinetic Molecular Theory of Gases, Behaviour of Real Gases: Deviation from Ideal Gas Behaviour, Liquefaction of Gases, Liquid State

**Thermodynamics :** Thermodynamic Terms, Applications, Measurement of  $\Delta U$  and  $\Delta H$ : Calorimetry, Enthalpy Change,  $\Delta_r H$  of a Reaction – Reaction Enthalpy, Enthalpies for Different Types of Reactions, Spontaneity, Gibbs Energy Change and Equilibrium

**Equilibrium :** Equilibrium in Physical Processes, Equilibrium in Chemical Processes – Dynamic Equilibrium, Law of Chemical Equilibrium and Equilibrium Constant, Homogeneous Equilibria, Heterogeneous Equilibria, Applications of Equilibrium Constants, Relationship between Equilibrium Constant K, Reaction Quotient Q and Gibbs Energy G, Factors Affecting Equilibria, Ionic Equilibrium in Solution, Acids, Bases and Salts, Ionization of Acids and Bases, Buffer Solutions, Solubility Equilibria of Sparingly Soluble Salts

**ABOUT INSTRUCTOR****Dr. Alka Mehrotra**

Dr. Alka Mehrotra is Professor in Department of Education in Science and Mathematics, NCERT, she is specialized in Organic Chemistry and has vast experience in Science Education. She has been the member of NCERT's Textbook development team for Chemistry at different levels.

**Dr. Anjni Koul**

Dr. Anjni Koul has 13 years of Research/ Teaching experience in National and International Laboratories/ Universities. CSIR Research Associate in School of Life Sciences, Jawaharlal Nehru University, New Delhi (1991-1997). Post Doctoral Fellow in Department of Dermatology, Case Western University, Cleveland, Ohio, U.S.A (1997- 1998). Pool Scientist (CSIR) in Department of Biochemistry, Punjab University, Chandigarh (1999- 2001). Presently working as Professor of Chemistry in Department of Education in Science and Mathematics, NCERT.

**Dr. Aerum Khan**

Dr. Aerum Khan has worked as Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi from a long time. She has Ph.D. degrees in

Plant Physiology and Biochemistry, and Education (Science Education), and teaching experience of more than 12 years. Her areas of research interest include ICT integration in School and Higher Education, Plant Physiology and Biochemistry, and Pedagogical aspects of Science Education. She has published many Research articles/ papers, books and deliberated more than 60 Research papers in National and International Conferences and seminars. The first PG Course in 'Education' developed by her and team is launched by UGC on the SWAYAM Platform.



**PROF. ALKA MEHROTRA**

Faculty in the Department of Education in Science and Mathematics, NCERT, New Delhi

**DR. AERUM KHAN**

Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi

**PROF. ANJNI KOUL**

Faculty in the Department of Education in Science and Mathematics, NCERT, New Delhi

**FIRST CYCLE : July 8, 2017 To Dec 31, 2017**

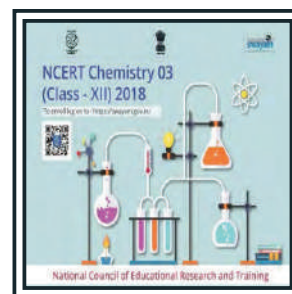
<https://swayam.gov.in/course/3899-ncert-chemistry-03-class-12>

**SECOND CYCLE : June 1, 2018 To Nov 30, 2018**

<https://swayam.gov.in/courses/4932-ncert-chemistry-03-class-xii-2018>

**ABOUT THE COURSE**

Chemistry is the study of matter and its properties. How and why substances combine or separate to form other substances, how substances interact to absorb or produce energy. Chemistry is known as the central branch of science because it touches all other natural sciences like biology, physics, geology and many more. It has made a profound impact on the society. This course is designed for class 12th on NCERT textbook pattern, it is intended to cover topics on Solid State, Solutions, Electrochemistry, Chemical Kinetics, Surface Chemistry, General Principles and Processes of Isolation of Elements, The *p*-Block Elements, *d* and *f*-Block Elements and coordination compounds for the students of Class XII, Semester 1 specific, and others interested in general. This is a 6 months course. Each week, module(s) containing eText, Video tutorial along with Self Assessment questions and Weblinks for extra study will be provided for learning.

**COURSE SCHEDULE**

**The Solid State :** General Characteristics of Solid State, Amorphous and Crystalline Solids, Classification of Crystalline Solids, Crystal Lattices and Unit Cells, Number of Atoms in a Unit Cell, Close Packed Structures, Packing Efficiency, Calculations Involving Unit Cell Dimensions, Imperfections in Solids, Electrical Properties, Magnetic Properties

**Solutions :** Types of Solutions, Expressing Concentration of Solutions, Solubility, Vapour Pressure of Liquid Solutions, Ideal and Non-ideal Solutions, Colligative Properties and Determination of Molar Mass, Abnormal Molar Masses

**Electrochemistry :** Electrochemical Cells, Galvanic Cells, Nernst Equation, Conductance of Electrolytic Solutions, Electrolytic Cells and Electrolysis, Batteries, Fuel Cells, Corrosion

**Chemical Kinetics :** Rate of a Chemical Reaction, Factors Influencing Rate of a Reaction, Integrated Rate Equations, Pseudo First Order Reaction, Temperature Dependence of the Rate of a Reaction, Collision Theory of Chemical Reactions, Adsorption, Catalysis, Colloids, Classification of Colloids, Emulsions, Colloids Around Us

**General Principles and Processes of Isolation of Elements :** Occurrence of Metals, Concentration of Ores, Extraction of Crude Metal from Concentrated Ore, Thermodynamic Principles of Metallurgy, Electrochemical Principles of Metallurgy, Oxidation Reduction, Refining, Uses of Aluminium, Copper, Zinc and Iron

**The p-Block Elements :** Group 15 Elements, Dinitrogen, Ammonia, Oxides of Nitrogen, Nitric Acid, Phosphorus – Allotropic Forms, Phosphine, Phosphorus Halides, Oxoacids of Phosphorus, Group 16 Elements, Dioxygen, Simple Oxides, Ozone, Sulphur – Allotropic Forms, Sulphur Dioxide, Oxoacids of Sulphur, Sulphuric Acid, Group 17 Elements, Chlorine, Hydrogen Chloride, Oxoacids of Halogens, Interhalogen Compounds, Group 18 Elements

**The d-and f-Block Elements :** Position in the Periodic Table, Electronic Configurations of the d-Block Elements, General Properties of the Transition Elements (d-Block), Some Important Compounds of Transition Elements, The Lanthanoids, The Actinoids, Some Applications of d- and f-Block Elements

**Coordination Compounds :** Werner's Theory of Coordination Compounds, Definitions of Some Important Terms Pertaining to Coordination Compounds, Nomenclature of Coordination Compounds, Isomerism in Coordination Compounds, Bonding in Coordination Compounds, Bonding in Metal Carbonyls, Stability of Coordination Compounds, Importance and Applications of Coordination

**ABOUT INSTRUCTOR****Dr. Alka Mehrotra**

Dr. Alka Mehrotra is Professor in Department of Education in Science and Mathematics, NCERT, she is specialized in Organic Chemistry and has vast experience in Science Education. She has been the member of NCERT's Textbook development team for Chemistry at different levels.

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**Dr. Aerum Khan**

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**PROF. APARNA PANDEY**

Faculty in Department of Education in  
Social Sciences, NCERT, New Delhi

**DR. ARCHANA**

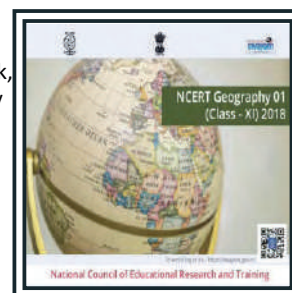
Assistant Professor in Central Institute of Educational  
Technology, NCERT, New Delhi

**FIRST CYCLE** : July 8, 2017 To Dec 31, 2017  
<https://swayam.gov.in/course/3900-ncert-geography-01-class-11>

**SECOND CYCLE** : June 1, 2018 To Nov 30, 2018  
<https://swayam.gov.in/courses/4933-ncert-geography-01-class-xi-2018>

**ABOUT THE COURSE**

You have studied Geography as one of the components of social sciences up to secondary stage. Now you will study Geography as an independent subject and learn about the physical environment of the earth, human activities and their interactive relationships. We live on the surface of the earth. Our lives are affected by our surroundings in many ways. We depend on the resources to sustain ourselves in the surrounding areas. This course is designed on NCERT textbook pattern. It is intended for the students of Class XI, Semester 1 specific, and others interested in general. This is a 6 months course. Each week, module(s) containing eText, Video tutorial along with Self Assessment questions and Weblinks for extra study will be provided for learning.

**COURSE SCHEDULE****Unit 1 Geography as a Discipline :**

1. Geography as an integrating discipline, as a science of spatial attributes.
2. Branches of geography; importance of physical geography

**Unit 2 The Earth :**

1. Origin and evolution of the earth
2. Interior of the earth
3. Wegener's continental drift theory and plate tectonics
4. Earthquakes and volcanoes

**Unit 3 Landforms**

1. Rocks and minerals – major types of rocks and their characteristics
2. Landforms and their evolution
3. Geomorphic processes – weathering, mass wasting, erosion and deposition; soils – formation

**Unit 4 Climate**

1. Atmosphere – compositions and structure; elements of weather and climate
2. Insolation – angle of incidence and distribution; heat budget of the earth – heating and cooling of atmosphere (conduction, convection, terrestrial radiation, advection); temperature – factors controlling temperature; distribution of temperature – horizontal and vertical; inversion of temperature
3. Pressure – pressure belts; winds – planetary seasonal and local, air masses and fronts; tropical and extra tropical cyclones
4. Precipitation – evaporation; condensation – dew, frost, fog, mist and cloud; rainfall – types and world distribution
5. World climate - classification (Koeppen), Greenhouse effect, global warming and climate changes.

**Unit. 5 Water (Oceans)**

1. Hydrological Cycle
2. Oceans – submarine relief; distribution of temperature and salinity; movements of ocean water – waves, tides and currents

**Unit. 6 - Life on the Earth**

1. Biosphere – importance of plants and other organisms
2. Biodiversity and conservation; ecosystems, bio-geo chemical

**ABOUT INSTRUCTOR****Prof Aparna Pandey**

Prof. Aparna Pandey is working as Professor in Department of Education in Social Sciences, NCERT, New Delhi. Her areas of specialisation include Geography education, urban and regional planning, environmental studies, remote sensing and Geographical Information System.

**Dr. Archana**

Dr. Archana has worked as Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi. She has Ph.D. degree in urban Geography. Her areas of research interest include ICT and Urban Geography. She is also involved in development and



**PROF. APARNA PANDEY**

Faculty in Department of Education in  
Social Science, NCERT, New Delhi

**DR. ARCHANA**

Assistant Professor in Central Institute of  
Educational Technology, NCERT, New Delhi

**FIRST CYCLE** : July 8, 2017 to Dec 31, 2017

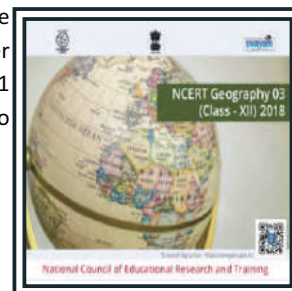
<https://swayam.gov.in/course/3901-ncert-geography-03-class-12>

**SECOND CYCLE** : June 1, 2018 to Nov 30, 2018

<https://swayam.gov.in/courses/4934-ncert-geography-03-class-xii-2018>

**ABOUT THE COURSE**

Geography is as an elective subject at the higher secondary stage. It is an academic discipline and school subject with defined perspective, knowledge and skills. Geographical knowledge is useful in daily lives because it is a valuable medium for the education of young people. Its contribution lies in the content, cognitive processes, skills and values that geography promotes and thus helps the students explore, understand and evaluate the environmental and social dimensions of the world in a better manner. This course is designed on NCERT textbook pattern. It is intended for the students of Class XII, Semester 1 specific, and others interested in general. This is a 6 months course. Each week, module(s) containing eText, Video tutorial along with Self Assessment questions and Weblinks for extra study will be provided for learning.

**COURSE SCHEDULE****Unit 1 Human Geography**

1. Nature and Scope of human Geography

**Unit 2. People**

1. Population of the world – distribution, density and growth
2. Population change-spatial patterns and structure; determinants of population change
3. Age-sex ratio; rural-urban composition
4. Human development – concept; selected indicators, international comparisons

**Unit 3. Human Activities**

1. Primary activities – concept and changing trends; gathering, pastoral, mining, subsistence agriculture, modern agriculture; people engaged in agriculture and allied activities – some examples from selected countries;
2. Secondary activities – concept; manufacturing: agro-processing, household, small scale, large scale; people engaged in secondary activities – some examples from selected countries
3. Tertiary activities – concept; trade, transport and communication; services; people engaged in tertiary activities – some examples from selected countries
4. Quaternary activities – concept; knowledge based industries; people engaged in quaternary activities – some examples from selected countries

**Unit 4 Transport, Communication and Trade**

1. Land transport – roads, railways – rail network; trans-continental railways
2. Water transport- inland waterways; major ocean routes
3. Air transport – Intercontinental air routes
4. Oil and gas pipelines
5. Satellite communication and cyber space
6. International trade – Basis and changing patterns; ports as gateways of international trade, role of WTO in International trade.

**Unit. 5. Human Settlements**

1. Settlement types – rural and urban; morphology of cities
2. Distribution of mega cities; problems of human settlements in developing countries.

**ABOUT INSTRUCTOR****Dr. Tannu Malik**

Dr. Tannu Malik is working as Associate Professor in Department of Education in Social Sciences, NCERT, and New Delhi. Her areas of specialisation are Geography education, Environment education and Disaster Management.

**Dr. Archana**

Dr. Archana has worked as Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi. She has Ph.D. degree in urban Geography. Her areas of research interest include ICT and Urban Geography. She is also involved in development and





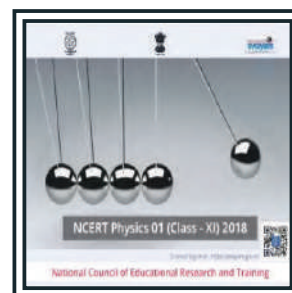
**MRS. ANURADHA MATHUR**  
Head Mathematics (Retd.) Modern School,  
Vasant Vihar, New Delhi

**FIRST CYCLE** : July 01, 2017 to Dec 31, 2017  
<https://swayam.gov.in/course/3836-ncert-physics-01-class-11>

**SECOND CYCLE** : June 1, 2018 to Nov 30, 2018  
<https://swayam.gov.in/courses/4937-ncert-physics-01-class-xi-2018>

### ABOUT THE COURSE

The world around us has an astonishing variety of phenomenon. Physics gives us a chance to take a close look and try to understand these. We have evidence to support the work since ancient times by thinkers, philosophers and scientists, who tried to unravel the mystery around us. The excitement of learning to do systematic scientific work is the root of this course. You will learn methods of measurement-including universally accepted norms. Kinematics and Dynamics, one that helps us realise how things move and the other what causes them to move. Some energy is required to move things and we will define some scientific terminology in a way that communication about physics to others is easy. This course is designed on NCERT textbook pattern. It is intended for the students of 23 Class XI, Semester 1 specific, and others interested in general. This is a 6 months course. Each week, module(s) containing eText, Video tutorial along with Self Assessment questions and Weblinks for extra study will be provided for learning.



### COURSE SCHEDULE

**Unit 1** : Physical World and Measurement

**Unit 2**: Kinematics

**Unit 3**: Laws of Motion

**Unit 4**: Work, Energy and Power

**Unit 5**: Motion of System of Particles

**Unit 6**: Gravitation

### ABOUT INSTRUCTOR

**Mrs. Anuradha Mathur**

Anuradha Mathur has been teaching Physics since 1975 at secondary and senior secondary level. She has also taught physics to undergraduate students at Harvard University Boston She represented Indian schools at ICT conference in Hawaii, Paris GATE Global Alliance for Transnational Education, IIT Delhi and IIM Bangalore. At Modern School Vasant Vihar New Delhi she was head of Physics and head of Resource Center . She set up the resource centre 1997 and a virtual school in 2000. She led the development of a diagnostic e-test , for the process of teaching and learning. She developed techniques to evolve net based projects, science exhibitions, science toys production and creative models, many of these were awarded at national and international level. She has been part of development team for teaching learning material for CBSE, NCERT ,NIOS ,ICSE since 1983.She was also member of Textbook Development Committee for senior secondary physics text book (2006). She is currently actively working on development of material for National Repository of Open Educational Resource (NROER) at CIET NCERT.



**MRS. ANURADHA MATHUR**

Head Mathematics (Retd.) Modern School,  
Vasant Vihar, New Delhi

**MRS. CHITRA GOEL**

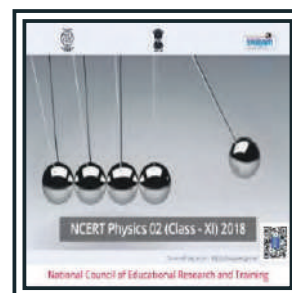
Principal (Retd.) Rajkiya Pratibha Vikas  
Vidyalaya, New Delhi

**FIRST CYCLE : June 1, 2018 to Nov 30, 2018**

<https://swayam.gov.in/courses/5061-ncert-physics-02-class-xi-2018>

**ABOUT THE COURSE**

Physics Course 2 covers the second book of physics for class 11. The course starts with bulk properties of matter, giving scientific names to many phenomenon that we observe around us. Why materials show peculiar behaviour in different states is analysed. This part is therefore very exciting. We will cover kinetic theory of gases and thermodynamics. Both these units will help us to justify the behavior of gases for innumerable uses related to getting mechanical work done by heat. The challenging unit on oscillations and waves has been dealt with differently to explain kinematics and dynamic of oscillators. Wave motion as a method of energy propagation and properties of waves, the cases of superposition are explained with simplicity. The course has 4 units covered over 42 modules for better understanding. Based on feedback from teachers and students we have included modules after completion of each unit to enhance the unit by additional examples and explanations.

**OBJECTIVES**

- Understand bulk properties of matter
- Relate to kinetic theory of gases
- Recognise thermodynamics
- Appreciate oscillatory motion and wave propagation

**COURSE SCHEDULE**

**Unit 7:** PROPERTIES OF BULK MATTER

**Unit 8:** Thermodynamics

**Unit 9:** Behaviour of Perfect Gases and Kinetic Theory of Gases

**Unit 10:** Oscillations and waves

**ABOUT INSTRUCTOR****Anuradha Mathur**

Anuradha Mathur has been teaching Physics since 1975 at secondary and senior secondary level. She has also taught physics to undergraduate students at Harvard University Boston. She represented Indian schools at ICT conference in Hawaii, Paris GATE Global Alliance for Transnational Education, IIT Delhi and IIM Bangalore. At Modern School Vasant Vihar New Delhi she was head of Physics and head of Resource Centre. She set up the resource centre 1997 and a virtual school in 37 2000. She led the development of a diagnostic e-test, for the process of teaching and learning. She developed techniques to evolve net based projects, science exhibitions, science toys production and creative models, many of these were awarded at national and international level. She has been part of development team for teaching learning material for CBSE, NCERT, NIOS, ICSE since 1983. She was also member of Textbook Development Committee for senior secondary physics text book (2006). She is currently actively working on development of material for National Repository of Open Educational Resource (NROER) at CIET NCERT.

**Chitra Goel**

Chitra Goel has 45 years of professional experience in teaching Physics and has worked in various capacities in the schools of the Directorate of Education GNCT Delhi. In addition to her regular teaching had also been actively associated with the NCERT, SCERT and the DOE. She designed and imparted special coaching to the needy and deserving students of various south Districts schools under DOE. This was to prepare them for common entrance tests in Engineering and Medicine resulting in high degree of success. She is the recipient of Pratibhanjali Award for academic Excellence for seven years; Teacher Excellence award by Lions Club of India in the year 2005; Dr S Radhakrishnan award for teachers of Excellence in 2006; State teacher award for excellence in imparting Education in 2008. She was Principal in Rajkiya Pratibha Vikas Vidyalaya.





**MS. ANURADHA MATHUR**  
Head Mathematics (Retd.) Modern School,  
Vasant Vihar, New Delhi

**FIRST CYCLE : 01/07/2017 to 31/12/2017**  
<https://swayam.gov.in/course/3846-ncert-physics-03-class-12>

**SECOND CYCLE : 01/06/2018 to 30/11/2018**  
<https://swayam.gov.in/courses/5061-ncert-physics-02-class-xi-2018>

### ABOUT THE COURSE

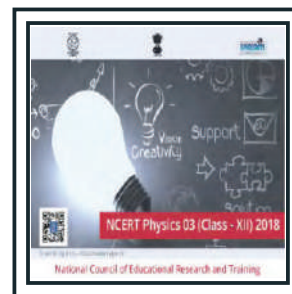
Course-3 in physics will cover very interesting phenomena that we have observe around us. The concepts of static electricity where we will understand electric charges and fields. We will learn methods of describing electric fields and their applications. we will also learn about charges in motion, about the two types of electricity around us- direct current and alternating current and also about generation of alternating current, behaviour of circuits with direct current and alternating current (with circuit elements like resistances, capacitors and inductors).

### COURSE SCHEDULE

- Unit 1:** Electrostatics
- Unit 2:** Current Electricity
- Unit 3:** Magnetic Effect of Current & Magnetism
- Unit 4:** Electromagnetic Induction & Alternating Current
- Unit 5:** Electromagnetic Waves

### ABOUT INSTRUCTOR

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**MRS. CHITRA GOEL**

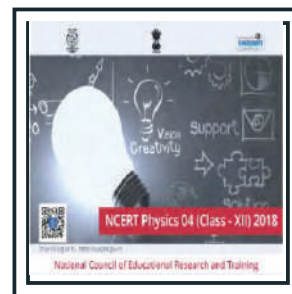
Principal (Retd.) Rajkiya Pratibha Vikas  
Vidyalaya, New Delhi

**FIRST CYCLE : 01/06/2018 to 30/11/2018**

<https://swayam.gov.in/courses/5062-ncert-physics-04-class-xii-2018>

**ABOUT THE COURSE**

Physics Course 4 covers the second book of physics for class 12. The units in this book provide motivation to learners to move towards intricate concepts of Physics. The nature of research and demand to know more has led to continuous and deeper understanding of reasons behind observed phenomenon. The course has 5 units spread over 43 modules. We start with optics and study it under ray optics, kind of macroscopic view of light and its interaction with objects around us. Wave optics, which proposes a microscopic explanation of the phenomenon of interference, diffraction and polarization. These cannot be explained using ray optics. The unit on dual nature of radiation and matter will present a unique view. The continuous and path breaking studies in quantum mechanics can be understood only if we understand initial scientific work which is in the unit of atoms and nuclei. Surrounded by electronics and technology, one will appreciate the unit on semiconductors and electronic devices. The unit is challenging as many new ideas will come up in the course. Likewise, the unit on communication will seem very basic, as there is fast scientific development in this field. The course does not demand high level of mathematics however, you will need to be regular as connections between various segments require deeper study and higher order thinking.

**OBJECTIVES**

Appreciate the need to study ray and wave optics

- Learn basics of dual nature of radiation and matter
- Know composition about atoms and nuclei and distribution of its constituents, radioactivity and nuclear energy
- Understand the behaviour of semiconductors and their application in making electronic devices
- Exposure to present day communication system

**COURSE SCHEDULE**

**Unit 6:** Optics

**Unit 7:** Dual Nature of Radiation and matter

**Unit 8:** Atoms and Nuclei

**Unit 9:** Electronic Devices

**Unit 10:** Communication systems

**ABOUT INSTRUCTOR**

Anuradha Mathur has been teaching Physics since 1975 at secondary and senior secondary level. She has also taught physics to undergraduate students at Harvard University Boston. She represented Indian schools at ICT conference in Hawaii, Paris GATE Global Alliance for Transnational Education, IIT Delhi and IIM Bangalore. At Modern School Vasant Vihar New Delhi she was head of Physics and head of Resource Center. She set up the resource centre 1997 and a virtual school in 2000. She led the development of a diagnostic e-test, for the process of teaching and learning. She developed techniques to evolve net based projects, science exhibitions, science toys production and creative models, many of these were awarded at national and international level. She has been part of development team for teaching learning material for CBSE, NCERT, NIOS, ICSE since 1983. She was also member of Textbook Development Committee for senior secondary physics text book (2006). She is currently actively working on development of material for National Repository of Open Educational Resource (NROER) at CIET NCERT.

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## DR. TIL PRASAD SARMA

Associate Professor in Department of Education in Science and Mathematics, NCERT, New Delhi

## DR. MOHD. MAMUR ALI

Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi

**FIRST CYCLE** : 30/10/2017 to 30/04/2018

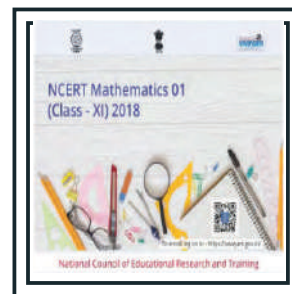
<https://swayam.gov.in/course/4325-ncert-mathematics-01>

**SECOND CYCLE** : 01/06/2018 to 30/11/2018

<https://swayam.gov.in/courses/5031-ncert-mathematics-01-class-xi-2018>

### ABOUT THE COURSE

Mathematics is a human activity, a social phenomenon a set of methods used to help illuminate the world and it is part of our culture. Mathematics is a part of our life experience which we talk about. Mathematics is the foundation and vitalizing energy for the basic sciences. Mathematics is not only about the developing new concepts but also developing a new meaningful language. Mathematics is a creative process, an art form expression of the human mind motivated by insight intuition and a desire to understand the world in which we live so intended for your effective and joyful learning. This is a 6 months course. Each week, one module containing eText, Video tutorial along with Self Assessment and Weblinks for extra study will be released.



### COURSE SCHEDULE

#### Unit 1-Sets and Functions

Sets Unit 1-Sets and Functions

Relations and Functions

Trigonometric Functions

#### Unit 2- Algebra

Principle of mathematical induction Unit 2- Algebra

Complex numbers and quadratic equations

Linear inequalities

Permutation and Combinations

Binomial Theorem

Sequence And Series

#### Unit 3- Coordinate geometry

Straight lines Unit

Conic sections

Introductions to 3-D geometry

### ABOUT INSTRUCTOR

Educational Qualification M.Sc. , Ph.D. (Mathematics) from University of Delhi

Areas of Work Mathematics Education at School level Development of Teaching Materials,

Teacher Training Material, Textual Material Research: Primary Mathematics, Mathematics Education, Mathematics

DR. MOHD. MAMUR ALI

working as Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi. He has about 10 years experiences in research, development and teaching at various level of education.





## DR. TIL PRASAD SARMA

Associate Professor in Department of Education in Science and Mathematics, NCERT, New Delhi

## DR. MOHD. MAMUR ALI

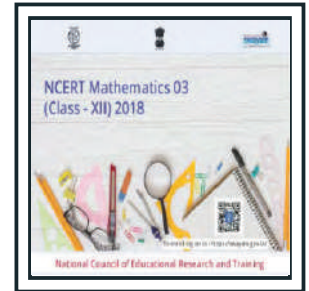
Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi

**FIRST CYCLE : 01/06/2018 to 30/11/2018**

**<https://swayam.gov.in/courses/5032-ncert-mathematics-03-class-xii-2018>**

### ABOUT THE COURSE

Mathematics is a human activity, a social phenomenon a set of methods used to help illuminate the world and it is part of our culture. Mathematics is a part of our life experience which we talk about. Mathematics is the foundation and vitalizing energy for the basic sciences. Mathematics is not only about the developing new concepts but also developing a new meaningful language. Mathematics is a creative process, an art form expression of the human mind motivated by insight intuition and a desire to understand the world in which we live so intended for your effective and joyful learning. The course will deal with the concepts from class 12th mathematics like certain Relations and Functions, Algebra, and Calculus. This is a 6 months course. Each week, one module containing eText, Video tutorial along with Self Assessment and Weblinks for extra study will be released.



### LEARNING OUTCOMES

After completion of the course, the learners will be able to:

1. Understand relation and function including Inverse Trigonometric Functions.
2. Matrices, Determinants etc.
3. Continuity and Functions, Application of derivatives, Integrals, Applications of Integrals and Differential equation

### COURSE SCHEDULE

#### Unit 1-Sets and Functions (19 modules=9 hrs 30 mins)

Sets  
Relations and Functions  
Trigonometric Functions

#### Unit2- Algebra (25 modules=12 hrs 30 mins)

Principle of mathematical induction  
Complex numbers and quadratic equations  
Linear inequalities  
Permutation and Combinations  
Binomial Theorem  
Sequence and Series

#### Unit 3- Coordinate geometry (13 modules=6 hrs 30 mins)

Straight lines  
Conic sections  
Introductions to 3-D geometry

#### Unit 1-Relations and Functions(7 modules=3 hrs 30 min)

Relations and Functions  
Inverse Trigonometric Functions

#### Unit 2- Algebra(12 modules=6 hrs)

Matrices  
Determinants

#### Unit 3- Calculus (21 modules =10 hrs 30 mins)

Continuity and Differentiability  
Application of derivatives  
Integrals  
Applications of Integrals  
Differential Equation

### ABOUT INSTRUCTOR

Educational Qualification M.Sc. , Ph.D. (Mathematics) from University of Delhi, His areas of Work Mathematics Education at School level Development of Teaching Materials, Teacher Training Material, Textual Material Research: Primary Mathematics, Mathematics Education, Mathematics.

DR. MOHD. MAMUR ALI

working as Assistant Professor in Central Institute of Educational Technology, NCERT, New Delhi. He has about 10 years experiences in research, development and teaching at various level of education.





**PROF. MANJU BHATT**

Faculty in Department of Education in Social Sciences,  
NCERT, New Delhi

**DR. SHEETAL SHARMA**

Assistant Professor in Centre for European Studies,  
JNU, New Delhi

**FIRST CYCLE** : 30/10/2017 to 30/04/2018  
<https://swayam.gov.in/course/4274-ncert-sociology-01-class-11>

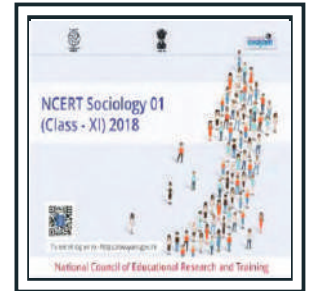
**SECOND CYCLE** : 01/06/2018 to 30/11/2018  
<https://swayam.gov.in/courses/4935-ncert-sociology-01-class-xi-2018>

**ABOUT THE COURSE**

The course covers the "Introducing Sociology" textbook of NCERT class XI. This is a 6 months course. Each week, one module containing eText, Video tutorial along with Self Assessment and Weblinks for extra study will be released.

**COURSE SCHEDULE**

1. Concept of Sociology and Society, (Sociology and relationship with other Social Sciences)
2. Terms, Concepts and Their Use in Sociology
3. Understanding Social Institutions
4. Culture and Socialization
5. Practical in Sociology: Methods and Techniques

**ABOUT INSTRUCTOR**

**1. Prof. Manju Bhatt** is Professor in Department of Education in Social Sciences, NCER. Her Educational Qualifications are MA, M.Phil., Ph.D. Her Areas of Interest and Specialisation are in Urban Sociology, Social Anthropology and Research Methodology.

**2. Sheetal Sharma**

Dr. Sheetal Sharma is Assistant Professor at the Centre for European Studies. Prior to her joining JNU, she was Lecturer since 1998 at Institute of Technology and Management, Gurgaon, India, and taught emergence of Sociological Theory in Europe and Methodology of Social Sciences as curriculum of degree program of London School of Economics and Political Science (LSE). Dr. Sharma holds a BA (Hon) in Sociology from the University of Delhi, and holds post graduate and doctorate degree in Sociology from the Centre for the Study of Social Systems, Jawaharlal Nehru University. Her research interests include social and cultural issues in contemporary Europe and India and their historical roots, Multiculturalism and Diversity, Methodology of Social Sciences, Gender and empowerment of women. Dr. Sharma avidly follows methodological and theoretical trends in Social Sciences and International Relations. She writes regularly on socially relevant issues in India and Europe for journals and magazines of national and international repute.



**DR. SHEETAL SHARMA**

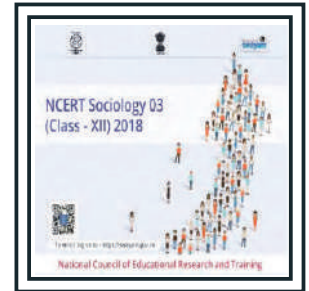
Assistant Professor in Centre for European Studies,  
JNU, New Delhi

**FIRST CYCLE : 30/10/2017 to 30/04/2018**  
<https://swayam.gov.in/course/4275-ncert-sociology-03-class-12>

**SECOND CYCLE : 01/06/2018 to 30/11/2018**  
<https://swayam.gov.in/courses/4939-ncert-sociology-03-class-xii-2018>

**ABOUT THE COURSE**

Sociology is a study of society but you will be puzzled to understand that what is there in this society to study the subject of sociology is very interesting as it helps us to understand the very society in which we live without sometimes realizing that it is so society in which we live without sometimes realizing that it is so society in which we live without sometimes realizing that it is so political institutions economic institutions etc what do sociologists do sociologists try to understand the nature and composition of these various sociologists try to understand the nature and composition of these various sociologists attempt to understand that what is the structure of family say for example if you are talking about family as an institution how many family types are there what are the functions of the family so these are the various aspects that sociologists try to understand so now understanding what is sociology we can say that sociology is an academic or a systematic study of society which emerged in Europe during 17 th and 18 th century it is also very important for the students of sociology to understand that how did the discipline of sociology emerge and develop you will be exploring about the social conditions in which the academic study of society began and how various sociologists later on from Europe and later on from India contributed towards understanding of social system myself dr. Heath L Sharma along with Professor Manju Burt will be taking you through the interesting journey of making sense of social systems in which we operate in everyday life will be taking examples from everyday life to make our understanding interesting.

**COURSE SCHEDULE**

1. Introducing Indian Society
2. Demographic Structure
3. Social Institution
4. Market As A Social
5. Patterns of Social Inequality and Exclusion
6. Challenges of cultural Diversity
7. Suggestions for Project

**ABOUT INSTRUCTOR**

Dr. Sheetal Sharma is Assistant Professor at the Centre for European Studies. Prior to her joining JNU, she was Lecturer since 1998 at Institute of Technology and Management, Gurgaon, India, and taught emergence of Sociological Theory in Europe and Methodology of Social Sciences as curriculum of degree program of London School of Economics and Political Science (LSE). Dr. Sharma holds a BA (Hon) in Sociology from the University of Delhi, and holds post graduate and doctorate degree in Sociology from the Centre for the Study of Social Systems, Jawaharlal Nehru University.



**PROF. ANJUM SIBIA**

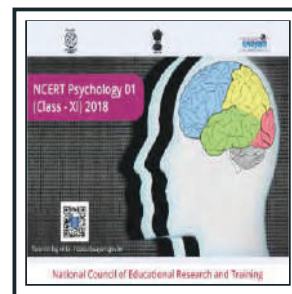
Faculty in Department of Educational Psychology and  
Foundations of Education, NCERT, New Delhi

**FIRST CYCLE : 01/06/2018 to 30/11/2018**

<https://swayam.gov.in/courses/5027-ncert-psychology-class-xi-2018>

**ABOUT THE COURSE**

The subject of psychology, which deals with human mind, behaviour and human relationship, can most appropriately lend itself to teaching with humanistic perspective. Such a perspective aims at enriching students knowledge as well as inspiring and awakening their curiosity, positive feelings, desire to learn, openness, exploration of self and others, etc. Such an approach is also conducive to their personal development and inculcation of positive attitude and love for the subjects. As for class XI students psychology will be a new subject, it would be important to dwell on the potential of the subject, its value in daily life and various career possibilities. Students, it is expected, will be made aware of the empirical nature of the discipline and the importance of adopting scientific approach in studying human behaviour. This course consists of nine chapters on topics considered essential for an introductory course in psychology like learning, thinking, memory, motivation and emotion, etc. Efforts have been made to provide linkages across and within the chapters to maintain continuity and holistic perspective. Meaningful contexts have been provided to relate the subject matter with day-to-day life.

**COURSE SCHEDULE****What is Psychology:**

What is Psychology, Evolution and Development of Psychology, Branches of Psychology and Themes of Research and Applications

**Methods of Enquiry in Psychology:**

Goals of Psychological Enquiry, Nature of Psychological Data and Important Method of its Enquiry, Experimental Method & Correlation Research and Survey Research & Psychological testing

**The Bases of Human Behaviour:**

Evolutionary Perspective of the Basis of Human Behaviour, Biological Basis of Human Behaviour & Cultural Basis of Human Behaviour

**Human Development:**

Meaning & Context of Human Development, Developmental Stages in Human: Childhood, Adolescence, Adulthood and Old Age & Factors influencing Human Development

**ABOUT INSTRUCTOR**

Dr. Anjum Sibia is a Professor of Psychology and has been working at the National Council of Educational Research and Training (NCERT) for last 25 years besides having eight years of prior experience of undergraduate teaching. She has contributed to the field by conducting research studies, preparing monographs and exemplar materials in the area of emotions and learning, innovative school practices, teacher questioning, emotional intelligence, peer tutoring, qualitative techniques, caring in teaching, and aesthetics in education, assessment of personal- social qualities and has undertaken evaluation of psychology textbooks. She has also published/presented papers, contributed book chapters and book reviews in these areas. She has coordinated and contributed as author in the development of the textbooks in psychology for senior secondary stage. As a member of various course committees she also provided academic inputs for designing of psychology syllabi, B.Ed courses, and Guidance and Counseling programmes.



**PROF. NEERAJA RASHMI**

Faculty in Department of Education in Social Sciences,  
NCERT, New Delhi

**FIRST CYCLE : 01/06/2018 to 30/11/2018**

<https://swayam.gov.in/courses/4940-ncert-economics-01-class-xi-2018>

**ABOUT THE COURSE**

The course on Indian Economic Development will give an idea to the learners about the foundation of Indian Economics & its development since Independence. The course will begin with a brief background of the Indian Economy on the eve of Independence. It will familiarise the learners with sectors of Indian Economy. It will also explain the planning process in India & its impact on different sectors of the economy. The reasons & processes of Economic reforms and the impact of economy will also be analysed. The learners will get an opportunity to know some of the major challenges facing the economy such as poverty, human capital formation, rural development, inflation, employment, infrastructure & sustainable development. A comparison of the development experience of India and its neighbouring countries will provide an idea of the perspective of development in these countries. We welcome you on the online course of Indian Economic Development. The course will deal with "Indian Economic Development" from class XI Economics. This is a 6 months duration course (26 weeks). Every two week one module will deliver. Each module of the course will have four quadrants, text, video, weblinks (to know more about the concept from other resources over the web), self assessment questions (MCQs, true/false, one word answers etc.).

**OBJECTIVES OF THE COURSE**

This course is intended to acquaint the students with the knowledge about:

- To expose the learners to some of the key issues facing the Indian economy
- To understand about foundation of Indian Economics & its development since Independence
- To familiarise the learners with sectors of Indian Economy
- To identify the reasons & processes of Economic reforms and the impact of economy
- To acquire skills to understand macroeconomic events which occur around them, and to critically evaluate and interpret the relevant information provided by the media

**COURSE SCHEDULE****1 Indian Economy on the Eve of Independence:**

Low level of Economic Development under Colonial Rule, Agricultural Sector, Foreign Trade, Industrial Sector, Demographic Condition, Occupational Structure, Infrastructure

**2 Indian Economy 1950-1990:**

The goals of Five Year Plans, Agriculture, Industry and Trade, Trade Policy

**3 Liberalisation, Privatisation and Globalisation:**

Liberalisation, Privatisation, Globalisation, Indian Economy During Reforms

**4 Poverty:**

Who are Poor?, How are Poor People Identified, The Number of Poor in India, Causes of Poverty, Policies and Programmes towards poverty Alleviation, poverty Alleviation Programmes

**5 Human Capital Formation in INDIA:**

Human Capital, Sources of Human Capital, Human Development, Education Sector in India,

**6 Rural Development:**

Rural Development, Credit and Marketing in Rural Areas, Agricultural Marketing System, Sustainable Development and Organic Farming

**7 Employment: Growth, Informalisation and Other Issues:**

Workers and Employment, Self Employed and Hired Workers, Employment in farms, factories and Offices, Unemployment, Government and Employment Generation

**8 Infrastructure:**

Infrastructure, Relevance of Infrastructure, The state of Infrastructure in India, Energy, Health

**9 Environment and Sustainable Development:**

Environment, State on India's Environment, Sustainable Development, Strategies for Sustainable Development

**10 Comparative Development Experiences of India and Its Neighbours:**

Developmental Path, Demographic Indicators, Gross Domestic Product, Indicators of Human Development, Development Strategies

**11 Recent Government Initiatives having Demonetisation, GST and Cashless Society:**

Recent Government Initiatives having Demonetisation, GST and Cashless Society

**ABOUT INSTRUCTOR**

She is Professor in Department of Education in Social Sciences (DESS), NCERT. Her area of interest



**DR. PRABHAT K. MISHRA**

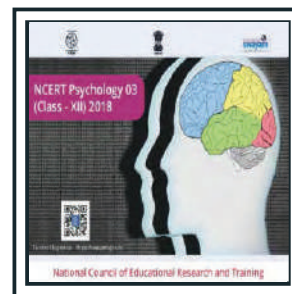
Assistant Professor in Department of Education in  
Social Sciences, NCERT, New Delhi

**FIRST CYCLE : 01/06/2018 to 30/11/2018**

<https://swayam.gov.in/courses/5028-ncert-psychology-03-class-xii-2018>

**ABOUT THE COURSE**

Psychology is one of the youngest sciences but one of the fastest growing. There are many who believe that the 21st century is going to be the century of biological sciences along with psychological sciences. Development in the fields of neurosciences, as well as physical sciences have opened new doors to solve the mysteries of mind and behaviour. There is no human endeavor which is going to remain unaffected by this new knowledge which is getting created. One only hopes that it will enable people to live their lives more meaningful and to organise human system better. Contents of the course will cover like variations in psychological attributes, personality, attitude psychological disorders, group processes etc., efforts have been made to provide linkages across and within the chapters to maintain continuity and holistic perspective. The course will introduce you to the fundamentals of psychology. Besides providing basic disciplinary knowledge, it focuses on enhancing your curiosity and understanding of people's behaviour and that of your own. The interactive nature of the course will help you understand psychology as a discipline as well as the practical applications of psychology in day-to-day life. The course will help you to explore yourself and the world of which you are the part.

**COURSE SCHEDULE****Variations in Psychological Attributes:**

Individual Differences in Psychological Attributes and its Assessment, Theories & Measurement of Intelligence, Variation in Intelligence & Creativity and Intelligence

**Self and Personality:**

Concept of Self & Personality, Major Approaches to the Study of Personality 1, Major Approaches to the Study of Personality 2, Major Approaches to the Study of Personality 3 & Projective Techniques & Behavioural Analysis

**Meeting Life Challenges:**

Nature, Types and Sources of Stress, Effect of Stress on Psychological Functioning and Coping with Stress & Stress Management Techniques & Promoting Positive Health

**Psychological Disorders:**

Abnormality and Psychological Disorders: An Introduction, Major Psychological Disorders 1 Major Psychological Disorders 2, & Major Psychological Disorders 3

**Therapeutic Approaches:**

Nature, Types and Sources of Stress, Effect of Stress on Psychological Functioning and Coping with Stress & Stress Management Techniques & Promoting Positive Health

**ABOUT INSTRUCTOR**

Dr. Prabhat K. Mishra has been working in the Department of Educational Psychology and Foundations of Education, NCERT, New Delhi since July, 2002. He has been involved in teaching the courses on Guidance for Human Development and Adjustment, and Basic Statistics in Diploma Course in Guidance and Counselling. Dr. Mishra has also been a Member Coordinator of the Textbooks in Psychology for Classes XI and XII brought out by the NCERT. He has also developed self-learning resource materials for teachers, teacher educators and counsellors, primarily on the theme of stress and coping. Dr. Mishra is a regular contributor of book chapters and a number of articles to various journals of repute.



**DR. JAYA SINGH**

Associate Professor in Department of Education in Social Sciences  
(DESS), NCERT

**FIRST CYCLE : 01/06/2018 to 30/11/2018**

<https://swayam.gov.in/courses/4941-ncert-economics-03-class-xii-2018>

**ABOUT THE COURSE**

It is a course which offers understanding of the various principles of microeconomics. Here effort has been made to familiarize learners with the beauty of economic analysis without burdening them with the technical details. Here, there is discussion on the various aspects of consumer behavior, producer behavior and their interaction in the market. One such market i.e perfect market includes discussion on how to maximize efficiency and generate surplus for both consumers and the producers. Such a market is very rare in the economy. Thus there is also a discussion on different types of imperfect market like monopoly etc. We hope these steps will take us significantly towards the child centered education as advocated in the National Policy of Education (1986). The course will motivate the teachers to reflect on their own teaching and treat children as participant in learning.

The course will deal with "Microeconomics" from class XII Economics. This is a 6 months duration course (26 weeks). Every two week/one week one module will deliver. Each module of the course will have four quadrants, text, video, weblinks (to know more about the concept from other resources over the web), self assessment questions (MCQs, true/false, one word answers etc.).

**OBJECTIVES OF THE COURSE**

This course is intended to acquaint the students with the knowledge about:

- To introduces the learner to economics as a science of abstraction and reasoning
- To Understand some basic economic concepts and developing economic reasoning which the learners can apply in their day-to-day life as citizens, workers and consumers.
- To Realise the role in nation building and sensitise the learners about the economic issues that the nation is facing today.
- To equip learners with basic tools of economics and statistics to analyse economic issues.
- To develop an understanding that there can be more than one view on any economic issue and to develop the skills to argue logically with reasoning.
- To introduce some basic concepts and tools to understand economic issues of an individual or a firm and how decisions are taken in variety of markets

**COURSE SCHEDULE****1 Introduction:**

Simple Economy, Central Problems of Economy, Organisation of Economic activity, Positive and Normative economies, Microeconomics, Macroeconomics

**2 Theory Of Consumer Behaviour:**

Utility, Consumer Budget, Demand, Market Demand, Elasticity of Demand

**3 Production and Costs:**

Production Function, Short Run and Long Run, Total Product, Average Product and Marginal Product, Law of Diminishing Marginal Product, Costs

**4 The Theory of the Firm under Perfect Competition:**

Perfect Competition, Revenue, Profit Maximisation, Supply Curve of a FIRM, Market Supply Curve, Price Elasticity of Supply

**5 Market Equilibrium:**

Equilibrium, Excess Demand, Excess Supply, Price Ceiling, Price Floor

**6 Non Competitive Markets:**

Monopoly in commodity Market, Average and Marginal Revenues, Short Run Equilibrium, Non Perfect Competitive Market, Oligopoly

**ABOUT INSTRUCTOR**

She is Associate Professor in Department of Education in Social Sciences (DESS), NCERT.





## PROF. POONAM AGRAWAL

Faculty in Department of Gender Studies,  
NCERT, New Delhi

## PROF. SUNITI SANWAL

Faculty in Department of Elementary  
Education, NCERT, New Delhi

## DR. YASH PAUL SHARMA

Assistant Professor in Central Institute of  
Educational Technology, NCERT, New Delhi

**FIRST CYCLE : 01/06/2018 to 30/11/2018**

<https://swayam.gov.in/courses/5066-food-nutrition-for-healthy-living>

### ABOUT THE COURSE

Who can imagine life without Food! Food is basic to our existence. Food is a key player in socialisation and social cohesion. There have been several reports of malnutrition or deaths due to poor nutrition, which have stirred the conscience of many. If you are one among those, we have this course for you. These days, nearly everyone is conscious about health and fitness. They want to know what to eat, how much to eat, how to prepare and how frequently to eat to remain active, healthy and fit. If you are one among those, this course is certainly for you. The course has 20 interesting modules which will answer most of your questions and concerns. If any remain, here are we, I and my team who will be there to interact with you and satisfy your quest for knowing what you are looking for. The 20 modules of the course deal with all aspects of Food, Nutrition, Health, Fitness and Hygiene and their interrelationships. Some of the titles include General knowledge about food selection for health and fitness; assessment of nutritional status, malnutrition; meal planning and minimising food wastage; healthy lifestyle - eating behaviour, physical activity, sleep and stress management; food labelling; food safety; nutraceuticals and functional foods etc.

Some of the things the course takers will be able to do after doing this course are

1. Assess nutritional status.
2. Preventive measures for better health.
3. Identify what lifestyle changes are required for health and wellness.
4. Interpret the food labels and make appropriate selection of foods and beverages.
5. Identify the medicinal properties of foods and food ingredients.

This is a 5 months duration course. One module shall be delivered per week. Each module of the course will have four quadrants, text, Video along with transcription; web links (to know more about the concept from other resources over the web), self assessment questions (MCQs, true/false, one word answers etc.) and learner will be motivated to have more interaction in discussion forums.

### COURSE SCHEDULE

**FNHL\_10101** Food, Nutrition, Health and Hygiene – Interrelationships

**FNHL\_10102** Assessment of Nutritional Status

**FNHL\_10103, FNHL\_10104** Common Health Problems

**FNHL\_10105, FNHL\_10106** Nutrients in Food

**FNHL\_10107** Balanced Diet

**FNHL\_10108** Conserving and Enhancing nutritive value of Food

**FNHL\_10109, FNHL\_101010** Food Selection for Health and Fitness

**FNHL\_101011, FNHL\_101012** Meal Planning and minimizing food wastage

**FNHL\_101013, FNHL\_101014** Life style for Health and Wellness

**FNHL\_101015** Food labels: Understanding and Interpreting

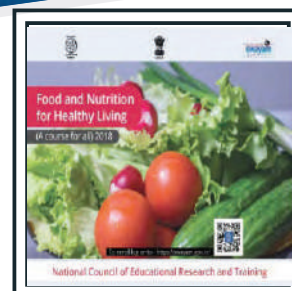
**FNHL\_101016** Malnutrition

**FNHL\_101017** Personal Hygiene

**FNHL\_101018** Food safety

**FNHL\_101019** Medicinal properties of Food ingredients

**FNHL\_101020** Nutraceuticals/ Functional Food



### ABOUT INSTRUCTOR

1. Professor Poonam Agrawal, a scholar in Food and Nutrition possess Master's degree in Foods & Nutrition, Doctorate in Biochemistry and Post Doctorate in Biotechnology from reputed national and international academic institutions including G.B. Pant University of Agriculture and Technology, Pantnagar; IARI, New Delhi; Institute of Wool Research, Aachen and Institute for Microbiology, University of Dusseldorf, W. Germany.

Professor Suniti Sanwal is working in the DEE, NCERT. She also served as Professor and Head in Department of Humanities, Science, Education and Research at PSSCIEVE, Bhopal.

Dr. Yash Paul Sharma: Dr. Yash Paul Sharma has worked as Assistant Professor in the Central Institute of Educational Technology, NCERT, New Delhi. With Ph.D. degree in Zoology and one-year PostDoc from CSIR, Dr. Sharma has interests in Taxonomy, evolutionary Biology and integrating ICT to teach biological concepts. Dr. Sharma has discovered several new species of ants with co-workers with publications in many international journals of repute.





विद्याधनम् सार्वधनं प्रधानम्

National Institute of Open Schooling



## Out of School Educational Courses



MHRD





# Out of School Educational Courses

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**DR. BAL KRISHNAN RAI**  
Assistant Director (Academics), NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

#### OBJECTIVE OF COURSE

हिंदी भाषी सामान्य व्यक्ति नई सूचना-क्रांति के परिणामस्वरूप आए अनेक शब्दों का प्रयोग अपने दैनिक जीवन में कर रहा है। इसके कारण साहित्य-लेखन में भी रचनाकारों की विचार-प्रक्रिया परिवर्तित हुई है। हिंदी भाषा भारत के जनतंत्र की आकांक्षाओं की पूर्ति करती है। इसी भाषा से देश के लोगों के बीच संपर्क स्थापित होता है। हिंदी भाषा का माध्यमिक स्तर का यह पाठ्यक्रम इन सभी बातों को ध्यान में रखते हुए तैयार किया गया है। यह जीवन और जगत की विभिन्न आवश्यकताओं में उपयोगी सिद्ध हो, इसी बात का ध्यान रखते हुए इसे अधिक व्यावहारिक, भाषा कौशल (सुनना, बोलना, पढ़ना और लिखना) आधारित और दैनिक जीवन से जुड़ा हुआ बनाने का प्रयास किया गया है। हम जीवन में मौखिक भाषा का सर्वाधिक प्रयोग करते हैं, अतः इस पाठ्यक्रम में सुनना और बोलना कौशल पर विशेष बल दिया गया है। व्याकरण कहीं पाठ्यक्रम को अधिक बोझिल न बना दे, इसके लिए इसे पाठ-सामग्री में ही समाहित किया गया है। इस रूप में यह पाठ्यक्रम अधिक व्यावहारिक तथा अन्य पाठ्यक्रमों से भिन्न और उपयोगी है।

#### LEARNING OUTCOME

- Hindi Language and Literature Learning
- Proficiency in Hindi
- Development of expression in Hindi

#### COURSE PLAN

**Week 01** : Chapter-1 बहादुर

**Week 02** : Chapter-2 दोहे

**Week 03** : Chapter-3 गिल्लू

**Week 04** : Chapter-4 आहवान

**Week 05** : Chapter-5 राबर्ट नर्सिंग होम में

**Week 06** : Chapter-6 भारत की ये बहादुर बेटियाँ

**Week 07** : Chapter-7 आजादी

**Week 08** : Chapter-8 चन्द्रगहना से लौटती बेर

**Week 09** : Chapter-9 अखबार की दुनिया

**Week 10** : Chapter-10 पढ़ें कैसे

**Week 11** : Chapter-11 सार कैसे लिखें

**Week 12** : Chapter-12 इसे जगाओ

**Week 13** : Chapter-13 सुखी राजकुमार

**Week 14** : Chapter-14 बूढ़ी पृथ्वी का दुख

**Week 15** : Chapter-15 अँधेर नगरी

**Week 16** : Chapter-16 अपना परायण

**Week 17** : Chapter-17 बीती विभावरी जाग री

**Week 18** : Chapter-18 नाखून क्यों बढ़ते हैं

**Week 19** : Chapter-19 शतरंज के खिलाड़ी

**Week 20** : Chapter-20 उनको प्रणाम

**Week 21** : Chapter-21 पत्र कैसे लिखें

**Week 22** : Chapter-22 निबंध कैसे लिखें

**Week 23** : Revision

**Week 24** : Revision

**Week 25** : Revision

**Week 26** : Revision

#### ABOUT INSTRUCTOR

Dr. Bal Krishnan Rai is Assistant Director (Academics) at NIOS Headquarter since 28th October 2016. He attained M.A. in Mass Communication and Hindi. He also attained M. Phil (Topic - Gantantra Divas ki Shobha Yatra [Ravindernath Tyagi] : Samvedana or Shilp) and Ph.D (University of Delhi, Certificate Course in Translation). The topic of Ph.D is 'Hindi ke Lalit Nibhandhon mein Manav Mulya'. He also done P.G. Diploma in Journalism & Mass Communication. Previously, he served as Academic Officer (Hindi) since July 2009 at NIOS, MHRD, Government of India, NOIDA; Hindi Officer since November 1999 at the NIOS, MHRD, Government of India, NOIDA and Hindi Translator at Mahanagar Telephone Nigam Ltd. since September 1996. His areas of interest are Open and Distance Learning & Adhunik Hindi Sahitya (Prose and Poetry).



**SAUMYA RAJAN**

Assistant Director(Academic)

**TYPE OF COURSE** : Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 26 weeks (01/08/2018 to 31/01/2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : Self certificate and minimum age 14 years**OBJECTIVE OF COURSE**

In a pluralistic and multilingual society like ours, the place of English as a link language cannot be denied. This position assumes even more importance in today's world where barriers in communication have broken down and information technologies have modified our lifestyles: we are fast moving towards a global village.

In today's time, a learner needs to be equipped with working English Language abilities so that he or she interacts meaningfully with the wide world ahead of him/her. Also, to ensure that a learner is not disadvantaged in terms of access to other courses of study and avenues of knowledge and information, knowledge of English is required.

**LEARNING OUTCOME**

- Learners should be able to listen to and understand short texts prescribed in the course book and react to the theme, structure and content.
- Learners should be able to repeat after a model and use English in familiar life situations.
- Learners should be able to read and understand a variety of texts critically and proficiently to demonstrate in writing or speech
- Learners should be able to write all forms of writing and texts using the conventions of Standard English as stylistically appropriate
- Learners should be able to use a Learner's Dictionary to find the meaning, usage and spelling of words

**COURSE PLAN****Week 1.** Snake Bite**Week 2.** How the Squirrel Got His Stripes**Week 3.** Kondiba - A Hero**Week 4.** Tall Trees**Week 5.** A Tiger Comes to Town-I**Week 6.** A Tiger Comes to Town-II**Week 7.** The Shoeshine**Week 8.** A Birthday Letter**Week 9.** Nine Gold Medals**Week 10.** Noise: How It Affects Our Lives**Week 11.** My Elder Brother**Week 12.** Indian Weavers**Week 13.** The Last Stone Mason**Week 14.** Stealing and Atonement**Week 15.** My Vision for India**Week 16.** My Only Cry**Week 17.** Caring for Others**Week 18.** The Little Girl**Week 19.** A Prayer for Healing**Week 20.** New Good Things from Rubbish**Week 21.** The Village Pharmacy**Week 22.** The Truth**Week 23.** The Return of the Lion**Week 24.** Co-operate and Prosper**Week 25.** Once Upon a Time**Week 26.** Ustad Bismillah Khan, The Parrot Who Wouldn't Talk**ABOUT INSTRUCTOR**

Saumya Rajan is a DPhil in English Literature from the University of Allahabad and trained and certified in Incorporating Gender Concerns in Public Policy from the Indian Institute of Public Administration, New Delhi. She is certified in Global Diplomacy- Diplomacy in the Modern World from the University of London & SOAS, University of London.





DR. R. N. MEENA

Designation: Assistant Director (Academic)

**TYPE OF COURSE** : Secondary  
**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (01/08/2018 to 31/01/2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

संस्कृतभाषा विश्वस्य प्राचीनतमा भाषा अस्ति। अस्यां भाषायां ज्ञान-विज्ञानयोः अनेके ग्रंथाः लिखिताः; ये आधुनिकस्य विज्ञानस्यापि अध्ययने सहायकाः सन्ति। न केवलं भारतस्य सर्वासु भाषासु अस्याः प्रभावः स्पष्टतया दृश्यते अपितु 'अवेस्ता' आदि वैदेशिकभाषास्वपि वर्तते। अतएव इमां भाषां ज्ञात्वा वयं अन्याः भाषाः अपि सारल्येन ज्ञातुं शक्नुमः। नवशब्दनिर्माणे अस्याः भाषायाः सामर्थ्यमनुपमम् वर्तते। संस्कृतभाषायाः अध्ययनेन वयं भारतस्य प्राचीनतमां संस्कृतिम् अपि ज्ञातुं शक्नुमः। एषः पाठ्यक्रमः सम्प्रेषण-आधरितोऽस्ति। एषः माध्यमिक-स्तरीयछात्राणां मार्गदर्शनार्थं निर्मितोऽस्ति। अनेन छात्राः संस्कृतभाषायां निहितनैतिकमूल्यैः अपि परिचिताः भविष्यन्ति स्वजीवने च तानि धरयितुं समर्थाः भविष्यन्ति। राष्ट्रनिर्माणेऽपि ते अधिकाधिकं सहायकाः भविष्यन्ति।

### विशिष्ट- उद्देश्यानि

#### श्रवणकौशलम्

- क. छात्राः संस्कृतस्य विशिष्टध्वनीन् श्रुत्वा अवगमिष्यन्ति। उदा.-पदान्तस्वरः पदान्तव्यंजनम्, विसर्गः, अनुस्वारः संयुक्ताक्षरम् इत्यादीनि।  
ख. संस्कृतस्य सरलवाक्यानि तेषामर्थं श्रुत्वा ज्ञास्यान्ति तदनुसारेण च व्यवहारं करिष्यन्ति।

#### वाचनकौशलम्

- क. संस्कृते प्रयुक्तानां विशिष्टध्वनीनां सम्यक्-उच्चारणं करिष्यन्ति (उदा-स्वरः, मात्रा, व्यंजनम्, संयुक्ताक्षराणि इत्यादि)  
ख. संस्कृतवाक्यानां सम्यक् उच्चारणं करिष्यन्ति।  
ग. पद्यरचनानां सस्वरवाचनं करिष्यन्ति।  
घ. पठितसामग्रीम् आश्रितानां प्रश्नानाम् उत्तराणि दास्यन्ति।

#### पठनकौशलम्

- क. संस्कृतगद्यांशानां, पद्यांशानां, नाट्यांशानां सारम् अवगमिष्यन्ति।

#### लेखनकौशलम्

- क. पठितपदानि वाक्यानि च श्रुत्वा शुद्धवर्तन्यां लेखितुं शक्यन्ति।  
ख. सन्धिभक्तपदानां समासयुक्तपदानां च वाक्यानाम् अनुलेखनं करिष्यन्ति।  
ग. पठितकथायाः तस्यांशानां वा सारं संस्कृतवाक्येषु लेखितुं शक्यन्ति।  
घ. चित्राणि दृष्ट्वा संस्कृतभाषायां तेषां वर्णनं कर्तुं शक्यन्ति।  
घ. प्रदत्तानि वाक्यानि घटनाक्रमानुसारेण लेखितुं शक्यन्ति।

### COURSE PLAN

- Week 1** पाठ 1. सुभाषितानि  
**Week 2** पाठ 2. प्रेरणा  
**Week 3** पाठ 3. त्याज्यं न धैर्यम्  
**Week 4** पाठ 4. कस्मात् किं शिक्षेत  
**Week 5** पाठ 5. प्राणस्य श्रेष्ठत्वम्  
**Week 6** पाठ 6. यद्भविष्यो विनश्यति  
**Week 7** पाठ 7. अयोध्यां प्रत्यागमनम्  
**Week 8** पाठ 8. विरहकातरं तपोवनम्  
**Week 9** पाठ 9. भारतीयविज्ञानम्  
**Week 10** पाठ 10. प्रहेलिका  
**Week 11** पाठ 11. रचनाकौशलम्  
**Week 12** पाठ 12. यक्ष - युधिष्ठिर संवाद  
**Week 13** पाठ 13. करुणापरा हि साधवः

### LEARNING OUTCOME

- संस्कृतभाषायाः सामान्यज्ञानवर्धनं भविष्यति।
- संस्कृतसाहित्यं प्रति छात्रेषु अभिरुचेः वर्धनम्।
- संस्कृतसाहित्यस्य प्रमुखविधानां प्रतिनिधिचनानां ज्ञानम्।
- छात्रेषु राष्ट्रियसांस्कृतिकसामाजिकनैतिक-मूल्यानां विकासः।
- विज्ञानप्रौद्योगिकीक्षेत्रे प्राचीनभारतीयमनीषिणां योगदानैः परिचयः।

- Week 14** पाठ 14. शरीरमाध्यं खलु धर्मसाधनम्  
**Week 15** पाठ 15. ईशः क्व अस्ति  
**Week 16** पाठ 16. गीतामृतम्  
**Week 17** पाठ 17. स्वस्तिपन्थामनुचरेम  
**Week 18** पाठ 18. कर्तव्यनिष्ठा  
**Week 19** पाठ 19. पुत्रोऽहं पृथिव्याः  
**Week 20** पाठ 20. सत्याग्रहाश्रमः  
**Week 21** पाठ 21. तेजसां हि न वयः समीक्ष्यते  
**Week 22** पाठ 22. पत्रलेखनम्  
**Week 23** Revision  
**Week 24** Revision  
**Week 25** Revision  
**Week 26** Revision

### ABOUT INSTRUCTOR

Dr. R.N. Meena Completed his M.A., M.Phil., Ph.D. from JNU, New Delhi. He has expertise in Language Learning, Open and Distance Learning, Philosophy and Thoughts, Theater, Screenplay writing for short film and educational videos, Linguistics, Gender, Caste and Tribal Issues





## DR. RAJENDRA KUMAR NAYAK

Academic Officer (Mathematics), NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

Mathematics is an indispensable subject area in the school education because of its wide application in our day today activities as well as in different fields of education. Access to quality education in Mathematics is very important for each and every learner. Mathematics is an important discipline of learning at the Secondary stage.

The present course in Mathematics has been divided into 26 lessons/chapters from six modules namely Algebra, Commercial Mathematics, Geometry, Mensuration, Trigonometry and Statistics. Text Materials, Audio and Video programmes are provided for your better learning. The assessment has been provided you in each lesson for your self assessment purposes.

### LEARNING OUTCOME

The learner will be able to:

- describe basic concepts, facts, principles, terms, symbols and processes of Mathematics.
- convert the word problems in to the mathematical forms and solve them.
- explain different ways of processing the given data and help them in arriving at conclusions.
- express the skills of quantification of experiences around them and make linkage with their life.
- solve wide variety of mathematical problems in daily life and reflect in different context of learning.
- relate mathematical knowledge and skills to solve variety problems and develop positive attitude towards Mathematics and its application.
- interpret tabular/graphical representation of the quantitative data.
- articulate logically and use the quantitative data to find many results.

### COURSE PLAN

**Week 01** : LESSON 1 - NUMBER SYSTEMS

**Week 02** : LESSON 2 - EXPONENTS AND RADICALS

**Week 03** : LESSON 3 - ALGEBRAIC EXPRESSIONS AND POLYNOMIALS

**Week 04** : LESSON 4 - SPECIAL PRODUCTS AND FACTORIZATION

**Week 05** : LESSON 5 - LINEAR EQUATIONS

**Week 06** : LESSON 6 - QUADRATIC EQUATIONS

**Week 07** : LESSON 7 - ARITHMETIC PROGRESSION

**Week 08** : LESSON 8 - PERCENTAGE AND ITS APPLICATIONS

**Week 09** : LESSON 9 - INSTALMENT BUYING

**Week 10** : LESSON 10 - LINES AND ANGLES

**Week 11** : LESSON 11 - CONGRUENCE OF TRIANGLES

**Week 12** : LESSON 12 - CONCURRENT LINES

**Week 13** : LESSON 13 - QUADRILATERALS

**Week 14** : LESSON 14 - SIMILARITY OF TRIANGLES

**Week 15** : LESSON 15 - CIRCLES

**Week 16** : LESSON 16 - ANGLES IN A CIRCLE AND CYCLIC QUADRILATERAL

**Week 17** : LESSON 17 - SECANTS, TANGENTS AND THEIR PROPERTIES

**Week 18** : LESSON 18 - CONSTRUCTIONS

**Week 19** : LESSON 19 - CO ORDINATE GEOMETRY

**Week 20** : LESSON 20 - PERIMETER AND AREA OF PLANE FIGURES

**Week 21** : LESSON 21 - SURFACE AREA AND VOLUME OF SOLID FIGURES

**Week 22** : LESSON 22 - INTRODUCTION TO TRIGONOMETRY

**Week 23** : LESSON 23 - TRIGONOMETRIC RATIOS OF SOME SPECIAL ANGLES

**Week 24** : LESSON 24 - DATA AND THEIR REPRESENTATION

**Week 25** : LESSON 25 - MEASURES OF CENTRAL TENDENCY

**Week 26** : LESSON 26 - INTRODUCTION TO PROBABILITY

### ABOUT INSTRUCTOR

Dr. Rajendra Kumar Nayak is Academic Officer (Mathematics) at NIOS Headquarters for 6 years. He attained M.Sc (Mathematics) from Ravenshaw University, Odisha and M.Ed from Regional Institute of Education (RIE, NCERT)-Bhubaneswar. He also attained his Ph.D in Mathematics Education from Utkal University, PGDDE (IGNOU). Previously, he worked as Lecturer in Education at Ravenshaw University, Cuttack from 2nd May, 2011 to 10th July, 2012; he worked as Assistant Professor in Mathematics Education at Regional Institute of Education (NCERT), Bhubaneswar from 6th July, 2010 to 30th April, 2011; he worked as Lecturer in Education at Army Institute of Education, Delhi Cantt, New Delhi from 1st October, 2009 to 31st May, 2010 and worked as Research fellow in Education Department, Regional Institute of Education (NCERT), Bhubaneswar from 1st July, 2008 to 30th September, 2009. His areas of interest are Mathematics Education, Educational Statistics, Measurement and Evaluation, Teacher Education and Distance Education.





### DR. SANGHMITRA SURYAPANI

Academic Officer (Biology), NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

#### OBJECTIVE OF COURSE

There are Thirty Two lessons in this course and you are expected to study them. The Course has seven modules. Each module would take you through various topics like Measurement in Science, Matter in our Surroundings, Moving Things and Energy. After studying these modules you would begin to understand the scientific principles behind many of the day to day events. Also, there are modules dedicated to the Living World, Natural Resources as well as Humans and Environment.

#### LEARNING OUTCOME

The learner will be able to:

- explain the science behind natural phenomena.
- enumerate the various facets of science and the role it plays in human welfare.
- develop scientific attitude so that reasoning wins over blind faith and opinions.
- formulate simple hypothesis, verify them and apply in their daily life activities.
- cultivate an interest in science and technology and be encouraged to pursue it as a career.

#### COURSE PLAN

**Week 01** : Lesson 1 Measurement in Science & Technology

**Week 02** : Lesson 2 Matter in our surroundings

**Week 03** : Lesson 3 Atoms and Molecules

**Week 04** : Lesson 4 Chemical Reaction & Equations

**Week 05** : Lesson 5 Atomic Structure

**Week 06** : Lesson 6 Periodic Classification of Elements

**Week 07** : Lesson 7 Chemical Bonding

**Week 08** : Lesson 8 Acid, Bases and Salts

**Week 09** : Lesson 9 Motion and its Description

**Week 10** : Lesson 10 Force and Motion

**Week 11** : Lesson 11 Gravitation

**Week 12** : Lesson 12 Sources of Energy

**Week 13** : Lesson 13 Work and Energy and Lesson 14 Thermal Energy

**Week 14** : Lesson 15 Light Energy and Lesson 16 Electrical Energy

**Week 15** : Lesson 17 Magnetic Effects of Electric Current and Lesson 18 Sound and Communication

**Week 16** : Lesson 19 Classification of Living Organisms and Lesson 20 History of Life on Earth

**Week 17** : Lesson 21 Building Blocks of Life- Cells & Tissues and Lesson 22 Life Processes I Nutrition, Transportation, Respiration and Excretion

**Week 18** : Lesson 23 Life Processes II Control and Coordination and Lesson 24 Life Processes III Reproduction

**Week 19** : Lesson 25 Heredity

**Week 20** : Lesson 26 Air and Water

**Week 21** : Lesson 27 Metal and Non-metals

**Week 22** : Lesson 28 Carbon and its Compounds

**Week 23** : Lesson 29 Natural Environment

**Week 24** : Lesson 30 Human Impact on Environment

**Week 25** : Lesson 31 Food Production and Animal Husbandry

**Week 26** : Lesson 32 Health and Hygiene

#### ABOUT INSTRUCTOR

Dr. Sanghmitra Suryapani is Academic Officer (Biology) at NIOS Headquarters for six years. She attained her B.Sc (Environmental Science) from Maitreyi College, Delhi University and M.Sc (Environmental Botany) from Jamia Hamdard University, New Delhi. She also done her Ph.D in Botany from Jamia Hamdard University, New Delhi. She also done Post Graduate Diploma in Environmental Law and Management from Indian Law Institute, New Delhi, India; Comprehensive Disaster Risk Management Framework from National Institute of Disaster Management-GFDRR (Online Course) and pursuing M.A (Distance Education) from IGNOU. Previously, she has two years experience of Guest Faculty for "Environmental Studies" undergraduate classes (BCA & B. Pharm.) at Jamia Hamdard, New Delhi; one year experience as a Senior Technical Assistant under the plan of "Bringing Green Revolution in Eastern India" and "National Food Security Mission", Krishi Bhawan, Ministry of Agriculture, New Delhi and also delivered Science Talk Shows and Discussions regarding Environmental Issues, broadcasted from Yuvvani, Vividh Bharti Division and Indraprastha Channel since 2001. Her areas of interest are Plant Ecology, Plant Physiology, Plant Biotechnology, Environmental Biology & Open and Distance Learning.





**SMT. TARUN**  
Assistant Director, NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

Social Science involves the study of human society which makes us familiar with evolution of human society and covers the major civilisations of the world. You will learn about India and the world during the Ancient, Mediaeval and Modern period. Further, you will understand interrelationships between nature, environment, resources and development. You would also learn about the importance of being a good citizen who fulfils his/her duties before enjoying his/her rights. The course highlights the mutually reinforcing relationship between the State and the citizen, leading to an insight into the functions of different levels of governments- rural and urban. You would be able to appreciate the political, social and economic challenges faced by India from within and outside the country and able to identify, understand and fulfil your own role for making a positive contribution towards nation building.

### LEARNING OUTCOME

- recall struggles and experiences of our previous generations;
- explain the need to judiciously use the country's resources and conserve them;
- establish that India as a functioning democracy is inspired by the values enshrined in our constitution; and
- interpret various socio-political problems in contemporary India.

### COURSE PLAN

**Week 01** : INTRODUCTION TO SOCIAL SCIENCE

**Week 02** : MEDIEVAL WORLD

**Week 03** : MODERN WORLD-1

**Week 04** : MODERN WORLD-11

**Week 05** : IMPACT OF BRITISH RULE ON INDIA: ECONOMIC, SOCIAL AND CULTURAL

**Week 06** : RELIGIOUS AND SOCIAL AWAKENING IN COLONIAL INDIA

**Week 07** : POPULAR RESISTANCE TO THE BRITISH RULE

**Week 08** : INDIAN NATIONAL MOVEMENT

**Week 09** : PHYSIOGRAPHY OF INDIA

**Week 10** : CLIMATE

**Week 11** : BIO-DIVERSITY

**Week 12** : AGRICULTURE IN INDIA

**Week 13** : TRANSPORT AND COMMUNICATION

**Week 14** : POPULATION COMPOSITION

**Week 15** : CONSTITUTIONAL VALUES AND POLITICAL SYSTEM IN INDIA

**Week 16** : FUNDAMENTAL RIGHTS AND FUNDAMENTAL DUTIES

**Week 17** : INDIA – A WELFARE STATE

**Week 18** : LOCAL GOVERNMENTS AND FIELD ADMINISTRATION

**Week 19** : GOVERNANCE AT THE STATE LEVEL

**Week 20** : GOVERNANCE AT THE UNION LEVEL

**Week 21** : POLITICAL PARTIES AND PRESSURE GROUPS

**Week 22** : PEOPLE'S PARTICIPATION IN THE DEMOCRATIC PROCESS

**Week 23** : CHALLENGES TO INDIAN DEMOCRACY

**Week 24** : NATIONAL INTEGRATION AND SECULARISM

**Week 25** : SOCIO-ECONOMIC DEVELOPMENT AND EMPOWERMENT OF DISADVANTAGED GROUPS

**Week 26** : ENVIRONMENTAL DEGRADATION AND DISASTER MANAGEMENT

### ABOUT INSTRUCTOR

Smt. Tarun Assistant Director in National Institute of Open Schooling (NIOS) Regional centre Chandigarh, Ministry of HRD, Govt. of India, Academic Consultant (Full Time, against the post of Assistant Regional Director) in IGNOU, Regional Center, Karnal, Haryana, India from 10 May to 29 Dec 2010. Lecturer (on Temporary basis) of Geography in KVA DAV College for Women, Karnal, Haryana, India from 21 July 2009 to 20 March 2010. Lecturer (as a guest faculty) of Disaster Management in Govt. College for Women, Karnal, Haryana, India from Nov 2008 to 31 March 2009

#### Areas of Interest/Specialization

- Open and Distance Learning
- Urbanization and Land Use Patterns

#### Experience

- Academic Officer (Geography) in National Institute of Open Schooling (NIOS), Ministry of HRD, Govt. of India, Noida-201309 (U.P.), India from 31 Dec 2010 to till now.
- Academic Consultant (Full Time, against the post of Assistant Regional Director) in IGNOU, Regional Center, Karnal, Haryana, India from 10 May to 29 Dec 2010.
- Lecturer (on Temporary basis) of Geography in KVA DAV College for Women, Karnal, Haryana, India from 21 July 2009 to 20 March 2010.
- Lecturer (as a guest faculty) of Disaster Management in Govt. College for Women, Karnal, Haryana, India from Nov 2008 to 31 March 2009







**SMT.SIBA SARASWATHY**  
Senior Executive Officer in Accountancy, NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

This course will enable learner to understand economy and different types of it. During the course, learners will get a clear view of central problems of an economy and basic economic activities. Learners are introduced with some basic concepts related to consumption, production and market mechanism.

### LEARNING OUTCOME

The learner will be able to:

- explain how societies, businesses, governments, households and individuals can allocate their scarce resources.
- explain production and distribution of goods and services.
- explain the meaning and functions of money, banks and insurance.
- discuss the challenges and sectoral aspects of Indian economy.
- describe in detail India's position in the world and with its neighbours.
- list various consumer rights and responsibilities.

### COURSE PLAN

**Week 01** : Chapter-1 What is Economics

**Week 02** : Chapter-2 Human Wants

**Week 03** : Chapter-3 Goods and Services

**Week 04** : Chapter-4 Economy – Its Meaning and Types

**Week 05** : Chapter-5 Central Problems of an Economy

**Week 06** : Chapter-6 Basic Economic Activities

**Week 07** : Chapter-7 Production

**Week 08** : Chapter-8 Cost and Revenue

**Week 09** : Chapter-9 Demand

**Week 10** : Chapter-10 Supply

**Week 11** : Chapter-11 Determination of Price and Quantity

**Week 12** : Chapter-12 Market

**Week 13** : Chapter-13 Role of Govt. in Determination of Price & Quantity System

**Week 14** : Chapter-14 Money and its Role

**Week 15** : Chapter-15 Banking and Credit

**Week 16** : Chapter-16 Savings and Insurance

**Week 17** : Chapter-17 Collection and Presentation of Data

**Week 18** : Chapter-18 Analysis of Data

**Week 19** : Chapter-19 An Overview of Indian Economy

**Week 20** : Chapter-20 Sectoral Aspects of Indian Economy

**Week 21** : Chapter-21 Challenges of Indian Economy

**Week 22** : Chapter-22 Indian Economy in Global Context

**Week 23** : Chapter-23 Environment and Sustainable Development

**Week 24** : Chapter-24 Consumer Awareness

**Week 25**: Revision

**Week 26**: Revision

### ABOUT INSTRUCTOR

Smt. Siba Saraswathy obtained her Master of Commerce (1992), Master of Philosophy (1994) and Bachelor of Education degree (1996) from University of Kerala. She worked as teacher in various schools and Colleges in Kerala State from 1997 to 2009. At present she is working with National Institute of Open Schooling, Sector -62, NOIDA, U.P. as Senior Executive Officer in Accountancy. Her current area of interest lies in Commerce and Management.





**SMT.SIBA SARASWATHY**  
Senior Executive Officer in Accountancy, NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

This course will give the learner an awareness of the world of business. This will help the learner to get an idea of different forms of business organisations available in our country. The course also explains various service sectors. The learner will be able to understand buying, selling and distribution techniques in business.

### LEARNING OUTCOME

The learner will be able to:

- understand the nature and scope of business activities and social responsibilities of business.
- classify the business activities into industry and commerce and decide the form of business organization for the same.
- list the need and importance of various aids to trade like warehousing, transport, communication, postal, banking, insurance etc.
- describe the new developments in the business world like e-banking, B.P.O., K.P.O. services etc.
- explain the channels of distribution and various types of retail trade.
- discuss the need and importance of advertising, sales promotion and personal selling.
- recall the need and importance of consumer protection and redressal of consumer grievances.
- discuss the importance of self employment and competencies required to pursue a career.
- develop the skill of doing the project work using the case study approach.

### COURSE PLAN

**Week 01** : Chapter-1 Nature Scope of Business

**Week 02** : Chapter-2 Industry & Commerce

**Week 03** : Chapter-3 Sole Proprietorship, Partnership & Hindu Undivided Family

**Week 04** : Chapter-4 Cooperative Societies and Joint Stock Companies

**Week 05** : Chapter-5 Transport Services

**Week 06** : Chapter-6 Warehousing Services

**Week 07** : Chapter-7 Communication Services

**Week 08** : Chapter-8 Postal and Courier Services

**Week 09** : Chapter-9 Banking Services

**Week 10** : Chapter-10 Insurance Services

**Week 11** : Chapter-11 Outsourcing

**Week 12** : Chapter-12 Purchase and Sale

**Week 13** : Chapter-13 Channels of Distribution

**Week 14** : Chapter-14 Retail Trade

**Week 15** : Chapter-15 Advertising

**Week 16** : Chapter-16 Sales Promotion and Personal Selling

**Week 17** : Chapter-17 Consumer – Rights and Responsibilities

**Week 18** : Chapter-18 Consumer Protection

**Week 19** : Chapter-19 Choosing a Career

**Week 20** : Chapter-20 Entrepreneurship

**Week 21** : Chapter-21 Project work

**Week 22** : Revision

**Week 23** : Revision

**Week 24** : Revision

**Week 25** : Revision

**Week 26** : Revision

### ABOUT INSTRUCTOR

Smt. Siba Saraswathy obtained her Master of Commerce (1992), Master of Philosophy (1994) and Bachelor of Education degree (1996) from University of Kerala. She worked as teacher in various schools and Colleges in Kerala State from 1997 to 2009. At present she is working with National Institute of Open Schooling, Sector -62, NOIDA, U.P. as Senior Executive Officer in Accountancy. Her current area of interest lies in Commerce and Management.





**DR. ANJANA AGARWAL**  
Senior Executive officer (SEO), NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

- Home science subject consists of five specializations, (1) Food and nutrition (2) Human Development (3) Family Resource Management (4) Textile and Apparel Science (5) extension and Communication.
- Five specializations integrates the life skills which equip the learner to face the challenges of life in changing scenario of eating habits, health, fashion, child care, family dynamics, market, media, mobile apps, entrepreneurs, laws and regulations etc. The learner finds his or her path to walk upon in future.
- Sky is limit for Home Science learners. The learner gains the knowledge, skills and abilities in each field of specializations. The learner with creative bend of mind may find career in planning and cooking healthy meals, fabric weaving and printing, work for play school, making utility articles. The learners are made sensitive towards their food habits, cooking practices and health of the all family members, care and selection of clothes, environment, safety, cleanliness, hygiene and sanitation in houses, role of ethics, values and positive attitude in people as well as consumer rights and responsibilities in the market
- Learners develop managerial skills through time, energy, and money and resource management. Home Science equips the learner in all aspects of life.

### LEARNING OUTCOME

recognize their own strengths and weaknesses and work on them to achieve their maximum potential;  
put into practice decision making and problem solving skills to make informed choices;  
Learn the milestones of growth and development and develop sensitivity for each member of the family in different life stages;  
develop lifelong ability to absorb knowledge and apply it effectively to meet the challenges to ever changing life while focusing on adolescent issues;  
become aware of the national issues and challenges and identify one's own role in overcoming them.

### COURSE PLAN

**Week 01** : Lesson 01 What is Home Science

**Week 02** : Lesson 02 Food and Nutrients, function of food, Nutrients and deficiency diseases

**Week 03** : Lesson 03 Food groups

**Week 04** : Lesson 04 Methods of cooking food

**Week 05** : Lesson 05 Food Preservation, Food Spoilage

**Week 06** : Lesson 06 Environment, Air Pollution, Water Pollution

**Week 07** : Lesson 07 Health, Factors Affecting Health

**Week 08** : Lesson 08 Communicable and Life Style diseases, Life Style Disease

**Week 09** : Lesson 09 Care and Maintenance of Fabric

**Week 10** : Lesson 10 Fibre to Fabric

**Week 11** : Lesson 11 Fabric Finishes, type of finishes

**Week 12** : Lesson 12 Housing

**Week 13** : Lesson 13 Safety at home

**Week 14** : Lesson 14 Introduction to Resources

**Week 15** : Lesson 15 Time & Energy Management

**Week 16** : Lesson 16 Managing Family Income

**Week 17** : Lesson 17 Life Begins

**Week 18** : Lesson 18 Concept of development

**Week 19** : Lesson 19 Family and I

**Week 20** : Lesson 20 Adolescence Charms and Challenges

**Week 21** : Lesson 21 Ethics in Daily Life

**Week 22** : Lesson 22 Consumer Education, Consumer Rights

**Week 23** : Lesson-01, 02 Assignments

**Week 24** : Lesson-03, 04 Assignments

**Week 25** : Lesson-05, 06 Assignments

**Week 26** : Lesson-07, 08 Assignments

### ABOUT INSTRUCTOR

Dr. Anjana Agarwal is employed at National Institute of Open Schooling (NIOS) as Senior Executive officer (SEO) in Academic department, Noida. She looks after academic activities including radio talks and video making for Home Science subject at secondary and senior secondary levels. She is well versed in Home Science and specialized in Food and Nutrition. She writes scientific articles and papers in national and international journals for long and the first author of "Text Book of Human Nutrition", 2014. She owns a website- [www.nutroma.in](http://www.nutroma.in) and provides dietary and nutritional counselling for health and disease. She had been academically involved for Food Science and Nutrition in various capacities in Dehradun and Mumbai for more than 16 years. She has also delivered presentations on nutrition and aromatherapy in public and corporate forums. She has achieved her higher education in Pantnagar and University of Delhi, New Delhi with fellowships.



**DR. SHWETA VERMA**

Executive Officer (Academic), NIOS

**TYPE OF COURSE** : Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : Self certificate and minimum age 14 years**OBJECTIVE OF COURSE**

- The study of psychology deals with important aspects of human behaviour and mental processes. The study of psychology is significant to one's personal growth and development and facilitates the process of social development. The way we think, feel and behave with the people and world around us influence our adjustment. The psychology course enables learners to understand the complex mental processes that govern human behaviour.
- The course offers an opportunity for learners to analyse the nature of psychology and the range of behaviours and mental processes. The course highlights on basic psychological processes, human development and social psychological process. You will also be able to learn about health and well being, work life and environmental concerns as well as the significance of psychology to understand the world of work.
- The course also introduces the learners to the concept of Yoga and its significance in day to day life.
- In all its essence the course collectively enables you to understand yourself and others around you to have a healthy life.

**LEARNING OUTCOME**

- explain the basic concepts of psychology and their application;
- relate oneself positively to family, neighbourhood and society;
- behave responsibly and in a value based manner;
- learn to live a purposeful life of health and happiness.

**COURSE PLAN****Week 01** : Introduction to Psychology, Methods of Psychology**Week 02** : INDIVIDUAL DIFFERENCES**Week 03** : SENSORY PROCESSES**Week 04** : Memory**Week 05** : Thinking and Problem Solving**Week 06** : Motivation and emotion**Week 07** : NATURE AND DETERMINANTS**Week 08** : Childhood**Week 09** : Adolescence and its challenges**Week 10** : Adulthood and Aging**Week 11** : Group and leadership**Week 12** : Communication**Week 13** : Attitude**Week 14** : Social and Educational Problem**Week 15** : Happiness and well being**Week 16** : Mental Disorders and Their Treatment**Week 17** : Mental Health and Hygiene**Week 18** : Aptitude, Interest and Job Requirements**Week 19** : Preparation for the Vocational Role**Week 20** : The World of Organisations**Week 21** : Environmental Stress**Week 22** : Healthy Mind in Healthy Body**Week 23** : Self development and Yoga**Week 24** : Nurturing the whole being \_ An Indian Perceptive Part**Week 25** : CONTROLLING AND DISCIPLINING THE MIND**Week 26** : Quiz**ABOUT INSTRUCTOR**

Name : Dr Shweta Verma

Designation: Executive Officer (Academic)

Department: NIOS, Academic Department PhD in Psychology from H.P.U. Shimla University, Worked with various government organizations as psychologist and counsellor and having a university teaching experience of more than 2 years. Presently working with NIOS in the academic department.





**DR. AZMAT NOORI**  
Academic Officer(History)

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (01/08/2018 to 31/01/2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

India is one of the ancient civilizations of the world which has stood the test of time. In fact what makes Indian culture unique among other ancient civilizations is its ability to accommodate and assimilate external influences and weave them into its own cultural fabric. This composite influence has not only enriched the cultural milieu of India, it has also made it stronger. Indian art, architecture, music, language, philosophy and religion reflect this diversity of influence that has occurred through centuries. This is the beauty of Indian Culture and Heritage. As Indian citizens not only do we need to be proud of this pluralistic and rich cultural heritage but also to study it objectively and assess it critically.

### LEARNING OUTCOME

- To familiarize learners with various aspects of the culture and heritage of India.
- To acquaint learners with the contributions of our ancestors in the areas of religion, philosophy, science, arts, education, languages and literature.
- To enable learners to appreciate the underlying unity amidst diversity in all aspects of India's culture.
- To acquaint learners with the impact of Indian culture in different countries of the world
- To enable learners to appreciate the composite nature of Indian culture.

### COURSE PLAN

**Week1:** Lesson 1: Culture: An Introduction

**Week 2:** Indian Culture

**Week 3:** Ancient India

**Week 4:** Medieval India

**Week 5:** Modern India

**Week 6:** Indian Languages and Literature-I

**Week 7:** Indian Languages and Literature-II

**Week 8:** Religion and Philosophy in ancient India

**Week 9:** Religion and Philosophy in Medieval India

**Week 10:** Religious Reform Movements in Modern India

**Week 11:** Indian Painting

**Week 12:** Performing Arts: Music, Dance and Drama

**Week 13:** Indian Architecture

**Week 14:** Science and Technology in India

**Week 15:** Scientists of Ancient India

**Week 16:** Science and Scientists of Medieval India

**Week 17:** Scientists of Modern India

**Week 18:** Education in India

**Week 19:** Indian Social Structure

**Week 20:** Socio-Cultural Issues in Contemporary India

**Week 21:** Spread of Indian Culture Abroad

**Week 22:** Revision

**Week 23:** Revision

**Week 24:** Revision

**Week 25:** Revision

**Week 26:** Revision

### ABOUT INSTRUCTOR

Name : Dr. Azmat Noori

Designation : Academic Officer (History)

Qualification: Ph.D (History), 2010, Aligarh Muslim University, Aligarh

M.A (History), 2005, Aligarh Muslim University, Aligarh

B.A (Hons), History, 2003, Aligarh Muslim University, Aligarh

P.G Diploma in Women Studies, 2008, Aligarh Muslim University, Aligarh





**SMT.SIBA SARASWATHY**  
Senior Executive Officer in Accountancy, NIOS

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

This course will help the learners to understand the basic concepts in accounting. The course enables the learner to understand the rules of debit and credit. After studying this course, the learners will develop the skill to prepare journal, other subsidiary books, trial balance and financial statements. During the course, learners will also get an idea of computers in accounting.

### LEARNING OUTCOME

The learner will be able to:

- understand the meaning, objectives, advantages, basic concepts and conventions of Accountancy.
- develop the skill of preparing the accounting equation.
- classify the accounts into different categories, understand the rules of debit and credit and develop the skill of preparing accounting vouchers.
- prepare the various books of accounts like journal, cash book, other subsidiary books and ledger.
- develop bank reconciliation statement.
- post the transactions from journal and other subsidiary books to ledger and prepare the trial balance.
- identify the accounting errors and to learn their rectification.

### COURSE PLAN

**Week 01** : Chapter-1 Introduction of Accounting

**Week 02** : Chapter-2 Accounting Concepts and Conventions

**Week 03** : Chapter-3 Accounting Terms

**Week 04** : Chapter-4 Accounting Equation

**Week 05** : Chapter-5 Double Entry System

**Week 06** : Chapter-6 Journal

**Week 07** : Chapter-7 Cash Book

**Week 08** : Chapter-8 Bank Reconciliation Statement

**Week 09** : Chapter-9 Purchase and Sales Book

**Week 10** : Chapter-10 Ledger

**Week 11** : Chapter-11 Trial Balance and Accounting Errors

**Week 12** : Chapter-12 Depreciation

**Week 13** : Chapter-13 Provisions and Reserve

**Week 14** : Chapter-14 Financial Statements (without adjustments)

**Week 15** : Chapter-15 Financial Statements (with adjustments)

**Week 16** : Chapter-16 Computers in Accounting

**Week 17** : Chapter-17 Introduction to Tally

**Week 18** : Revision

**Week 19** : Revision

**Week 20** : Revision

**Week 21** : Revision

**Week 22** : Revision

**Week 23** : Revision

**Week 24** : Revision

**Week 25** : Revision

**Week 26** : Revision

### ABOUT INSTRUCTOR

Smt. Siba Saraswathy obtained her Master of Commerce (1992), Master of Philosophy (1994) and Bachelor of Education degree (1996) from University of Kerala. She worked as teacher in various schools and Colleges in Kerala State from 1997 to 2009. At present she is working with National Institute of Open Schooling, Sector -62, NOIDA, U.P. as Senior Executive Officer in Accountancy. Her current area of interest lies in Commerce and Management.





## MS. SANCHITA BHATTACHARJEE

SEO (Painting)

**TYPE OF COURSE** : Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (01/08/2018 to 31/01/2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Self certificate and minimum age 14 years

### OBJECTIVE OF COURSE

Painting is nothing but skills to express oneself through colour and proportion and it also helps cultivate aesthetic sense. It further aims to develop the visual sense of the learner and to help him/her appreciate expressive value of line, texture, space, rhythm etc.

### LEARNING OUTCOME

- Learner will be to appreciate the History and Evaluation of Indian Art
- Explain the medium, techniques and styles of Indian Folk Art
- Create different shapes effectively in producing a composition
- Draw human figure with proportion

### COURSE PLAN

#### PRACTICAL

**Week 1.** TOOLS AND MATERIALS

**Week 2.** OBJECT STUDY

**Week 3.** NATURE STUDY

**Week 4.** HUMAN FIGURE

**Week 5.** STUDY OF ANIMALS AND BIRDS

**Week 6.** COMPOSITION

#### THEORY

**Week 7.** History and Appreciation of Art(From 3000 BC to 600 AD) 01

**Week 8.** History and Appreciation of Art 05(From 7th Century AD to 12th Century AD)

**Week 9.** History and Appreciation of Art (from 13th Century AD to 18th Century AD.)

**Week 10.** Folk Art of India 13

**Week 11.** Renaissance 17

**Week 12.** Impressionism 21

**Week 13.** Cubism, Surrealism and Abstract Art 24

**Week 14.** Pioneers of Contemporary Indian Art 27

**Week 15.** Contemporary Indian Art 30

**Week 16.** Revision

**Week 17.** Revision

**Week 18.** Revision

**Week 19.** Revision

**Week 20.** Revision

**Week 21.** Revision

**Week 22.** Revision

**Week 23.** Revision

**Week 24.** Revision

**Week 25.** Revision

**Week 26.** Revision

### ABOUT INSTRUCTOR

Presently working as a Senior Executive Officer (Performing Arts Education) in National Institute of Open Schooling from July 2001. She holds a master's degree M. A. in Drawing and Painting from Maharaja Tomar University, Madhya Pradesh. She has been engaged in conducting Meetings, Development of Curriculum, Learning Objectives, Study Materials, Audio and Video Material, Marking Schema, Tutor Mark Assignment, Question Item for On Demand Examination and organizing workshops in different parts of the Country in the field of Art and Culture.



**RADHIKA B**

Academic Officer (ICT), NIOS

**TYPE OF COURSE** : Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : Self certificate and minimum age 14 years**OBJECTIVE OF COURSE**

Data Entry Operations is an introductory course provides students with the opportunity to practice using computer, operating systems, documents, spreadsheets and presentation. In this subject student will learn about word processing which helps them to format their document and merge their document with data. Also student will learn about spreadsheet which helps them to analyse their data and presentation software helps them to present their views or ideas to audience.

**LEARNING OUTCOME**

- define basic components of computer system;
- explain the features of Operating System;
- develop the skills of creating, printing and formatting the documents;
- handle different features of Spreadsheet;
- format spreadsheet and insert charts;
- create PowerPoint presentations.

**COURSE PLAN****Week 01** : Basics of Computer**Week 02** : Video for L-01**Week 03** : Operating System**Week 04** : Video for L-02**Week 05** : Basics of Word Processing**Week 06** : Video for L-03**Week 07** : Formatting Documents**Week 08** : Video for L-04**Week 09** : Mail Merge**Week 10** : Video for L-05**Week 11** : Basics of Spreadsheet**Week 12** : Video for L-06**Week 13** : Formatting Worksheet**Week 14** : Video for L-07**Week 15** : Formulas, Functions and Charts**Week 16** : Video for L-08**Week 17** : Creating Presentation**Week 18** : Video for L-09**Week 19** : L-01 Quiz**Week 20** : L-02 Quiz**Week 21** : L-03 Quiz**Week 22** : L-04 Quiz**Week 23** : L-05 Quiz**Week 24** : L-06 Quiz**Week 25** : L-07 Quiz**Week 26** : L-08 Quiz**ABOUT INSTRUCTOR**

Name : Radhika B

Designation: Academic Officer (ICT), NIOS.

Having post graduation in Master of Computer Applications. Around 7+ years of intensive work experience in various projects and also gained experience and knowledge of the software development processes in the relevant technologies. Last six years associated in the content development of ICT courses in Academic and vocational courses of NIOS







## DR. SANGHMITRA SURYAPANI

Academic Officer (Biology)

**TYPE OF COURSE** : Sr.Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 6 Months (01/08/2018 to 31/01/2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th Passing Certificate and min. age 15 yr

### OBJECTIVE OF COURSE

Learner will be able to understand the concept of “learning by doing” which in turn helps in developing scientific temper.

### LEARNING OUTCOME

The course content begins from Biodiversity classification; Structure and function of the living; their reproduction and development and also Genetics, Molecular Biology, Biotechnology and Immunology which are the modern fields of Biology. An exhaustive treatment of the environment in all its aspects is also contained in the curriculum and so are topics like some common human diseases and health and nutrition which are closely related to human welfare. Module-I Diversity and Evolution of Life, Module-II Forms and Functions of Plants and Animals Module-III Reproduction and Heredity Module-IV Environment and Health and Module-V Emerging Areas in Biology.

### COURSE PLAN

**Week:1** Origin and Evolution of Life and Introduction to Classification

**Week:1** The Kingdom Monera, Protocista and Fungi

**Week:1** Kingdom Plantae and Animalia

**Week:2** Cell Structure and Function

**Week:2** Tissues and other Level of Organization

**Week:3** Root system

**Week:3** Shoot system

**Week:4** Absorption, Transport and Water Loss in Plants

**Week:4** Nutrition in plants - Mineral Nutrition

**Week:4** Nitrogen Metabolism

**Week:5** Photosynthesis

**Week:5** Respiration in Plants

**Week:6** Nutrition and Digestion

**Week:6** Respiration and Elimination of Nitrogenous Wastes

**Week:7** Circulation of Body Fluids

**Week:7** Locomotion and Movement

**Week:8** Coordination and Control - The Nervous and Endocrine Systems

**Week:8** Homeostasis: The Steady State

**Week:9** Reproduction in Plants

**Week:9** Growth and Development in Plants

**Week:10** Reproduction and Population Control

**Week:11** Principles of Genetics

**Week 12,13:** Molecular Inheritance and Gene Expression

**Week 14:** Genetics and Society

**Week 15,16:** Principles of Ecology

**Week 17,18:** Conservation and Use of Natural Resources

**Week 19:** Pollution

**Week 20:** Nutrition and Health

**Week 21,22:** Some Common Human Diseases

**Week 23,24:** Biotechnology

**Week 25,26:** Immunobiology: An Introduction

### ABOUT INSTRUCTOR

Dr. Sanghmitra Suryapani is working as an Academic Officer (Biology) at National Institute of Open Schooling (NIOS), NOIDA Uttar Pradesh. Dr. Suryapani has her Ph.D in Botany from Jamia Hamdard, University New Delhi. She has also done diploma in Environmental law and management from Indian Law Institute, New Delhi. She is a Subject Matter Specialist (SME) for Science and Technology at the Massive Open Online Courses (MOOC) platform for Swayam. She is also a State Coordinator; Mizoram for Diploma in Elementary Education (D. El. Ed) programme for in-service untrained teachers launched by NIOS an initiative of Ministry of Human Resource Development. She has developed self learning material of biology at Senior Secondary level. In addition to that she prepared learners guide for secondary, Science and Technology and developed various audio programmes through Muktavidyavani and video programs for MOOCs at NIOS. She has represented at various national, international and corporate platforms for writing and presenting talks.



**DR. RAJEEV PRASAD**

Assistant Director(Academic), NIOS

**TYPE OF COURSE** : Sr.Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 26 Weeks (1st Aug, 2018 to 31st Jan, 2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : 10th Passing Certificate and min. age 15 yr**OBJECTIVE OF COURSE**

According to present scheme of school education at Senior Secondary stage, chemistry emerges out as a separate discipline. The present chemistry course has been developed basically around the themes: Why do chemical reactions occur? What is the quantitative relationship among reacting constituents in a chemical reaction? How far and how fast will a chemical reaction proceed under a given set of conditions? Can we predict whether a chemical reaction will occur or not? What is the relation between the structure of a chemical substance and its functions/properties? In what way is a chemical reaction relevant for getting new types of substances and materials for daily life and chemical industries?

Some interdisciplinary aspects have also been provided to make the course more meaningful and functional. This Chemistry Course has three parts, I and II consist of theory portion and part III is a practical manual. Part I and II of theory portion has eight modules. Part-I consists of five modules namely as : Some basic concepts of chemistry, Atomic Structure and Chemical Bonding, States of matter, Chemical Energetics, and Chemical Dynamics. Part-II consists of three modules namely: Chemistry of Elements, Chemistry of Organic Compounds, and Chemistry in Everyday Life. Each module is further divided into different lessons.

**LEARNING OUTCOME**

After completing this course, the learner will be able to:

- explain the principles, theories and laws of chemistry responsible for various chemical processes/ reactions
- realise the role of chemistry in production of many elements (metals/non-metals) and compounds useful in industries and daily life
- identify the chemical nature of inorganic and organic substances around him/her
- choose various vocational, professional and applied courses of choice based on knowledge of chemistry gained
- perform chemical calculations to know about the chemical reactions and chemical compounds
- explain chemical reactions, concepts and phenomenon
- develop awareness about uses and abuses of chemical substances
- develop skills of arranging/setting apparatus, handling apparatus and chemicals properly ; and analyse and synthesise simple compounds.

**COURSE PLAN****Week 1:** Atoms, Molecules and Chemical Arithmetic**Week 2:** Atomic Structure & Periodic Table and Periodicity in Properties**Week 3:** Chemical Bonding**Week 4:** The Gaseous State and Liquid State & The Solid State**Week 5:** Solutions & Colloids**Week 6:** Chemical Thermodynamics & Spontaneity of Chemical Reactions**Week 7:** Chemical Equilibrium & Ionic Equilibrium**Week 8:** Electrochemistry**Week 9:** Chemical Kinetics & Adsorption and Catalysis**Week 10:** Occurrence and Extraction of Metals & Hydrogen and s-Block Elements**Week 11:** General Characteristics of the p-block Elements**Week 12:** p-block Elements and their Compounds – I**Week 13:** p-block Elements and their Compounds - II**Week 14:** d-Block and f-Block Elements & Coordination Compounds**Week 15:** Nomenclature and General Principles**Week 16:** Hydrocarbons**Week 17:** Compounds of Carbon Containing Halogens (Haloalkanes and Haloarenes)**Week 18:** Alcohols, Phenols and Ethers**Week 19:** Alcohols, Phenols and Ethers**Week 20:** Aldehydes, Ketones and Carboxylic Acids**Week 21:** Aldehydes, Ketones and Carboxylic Acids**Week 22:** Compounds of Carbon Containing Nitrogen**Week 23:** Biomolecules**Week 24:** Drugs and Medicines**Week 25:** Soaps, Detergents and Polymers**Week 26:** Environmental Chemistry**ABOUT INSTRUCTOR**

I Dr.Rajeev Prasad, Assistant Director(Academic), NIOS welcomes you all in this course. I have been working with NIOS from last eight years. I worked as Academic Officer(Chemistry), NIOS from 2011 to 2016 and developed and revised Senior Secondary Chemistry (313) of NIOS. My Specialisation is in Organic Chemistry. I have 11 years of Teaching experience at Senior Secondary Chemistry in reputed academic Institutions as Lecturer/PGT.



**DR. SAUMYA RAJAN**

Designation: Assistant Director (Academic)

**TYPE OF COURSE** : Sr.Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 6 Months (01/08/2018 to 31/01/2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : 10th Passing Certificate and min. age 15 yr**OBJECTIVE OF COURSE**

After completing this course, the learner will be able to:

- develop listening skills;
- develop speaking skills;
- develop reading skills;
- develop writing skills.

This course will also focus on elements of language – grammar and vocabulary. Special efforts will be made to enrich the vocabulary of students.

**LEARNING OUTCOME**

- Listening Skills
- Speaking Skills
- Reading Skills
- Writing Skills
- Study Skills
- Literary Skills

**COURSE PLAN****Week 1** My First Steps**Week 2** Leisure**Week 3** Reading With Understanding**Week 4** Father Dear Father**Week 5** Fuel of the Future**Week 6** My Grandmothers House**Week 7** Reading With Understanding**Week 8** A Case of Suspicion**Week 9** My Son will not a Beggar be**Week 10** Where the Mind is Without Fear**Week 11** Reading With Understanding**Week 12** If I Were You**Week 13** The Tiger in the Tunnel**Week 14** The Road not Taken**Week 15** Reading With Understanding**Week 16** I Must Know the Truth**Week 17** India-Her Past and Future**Week 17** Night of the Scorpion**Week 18** Reading With Understanding**Week 18** Reading With Understanding**Week 19** Reading With Understanding**Week 19** Reading With Understanding**Week 20** Reading With Understanding**Week 20** Reading With Understanding**Week 21** Bholi**Week 22** The Reception Desk and You**Week 22** Face to face Communication in Business**Week 23** Managing The Telephone**Week 23** Writing Memos and Letters**Week 24** Analysing Turns in Telephoning**Week 24** Writing e-mails**Week 25** Controlling Strategies and Out-Going Calls**Week 25** Writing Reports**Week 26** Aids for a Receptionist**Week 26** Writing Job Applications & Appearing for an Interview**ABOUT INSTRUCTOR**

Saumya Rajan is a DPhil in English Literature from the University of Allahabad and trained and certified in Incorporating Gender Concerns in Public Policy from the Indian Institute of Public Administration, New Delhi. She is certified in Global Diplomacy- Diplomacy in the Modern World from the University of London & SOAS, University of London.





**DR. BAL KRISHNAN RAI**  
Assistant Director (Academics), NIOS

**TYPE OF COURSE** : Sr. Secondary  
**INTENDED AUDIENCE** : School

**COURSE DURATION** : 6 months (01/08/2018 to 31/01/2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th Passing Certificate and min. age 15 yr

### OBJECTIVE OF COURSE

हिंदी अपने साहित्यिक एवं बोलचाल के रूप के माध्यम से आरम्भ से ही जन आकाक्षाओं की अभी व्यक्ति करती रही है, हिंदी साहित्य की समृद्धि का यह हुत बड़ा कारण है कि हिंदी ने समयनुसार अपने आप को परिवर्तित एवं समृद्ध किया है, आज के समय में एक तरफ तो हिंदी में अनेक विधाओं का हित्य लिखा जा रहा है दूसरी तरफ हिंदी मीडिया का भी विस्तार हुआ है हिंदी भाषी सामान्य व्यक्ति नई सूचना-क्रांति के परिणामस्वरूप आए अनेक शब्दों का प्रयोग अपने दैनिक जीवन में कर रहा है। इसके कारण साहित्य-लेखन में भी रचनाकारों की भाषिक क्षमता एवं विचार-प्रक्रिया परिवर्तित हुई है। हिंदी भाषा भारत के जनतंत्र की आकांक्षाओं की पूर्ति करती है। इस भाषा से देश के लोगों के बीच संपर्क स्थापित होता है। हिंदी भाषा का उच्चतर माध्यमिक स्तर का यह पाठ्यक्रम इन सभी बातों को ध्यान में रखते हुए तैयार किया गया है। यह जीवन और जगत की विभिन्न आवश्यकताओं में उपयोगी सिद्ध हो यह हमारा उद्देश्य है, इसी बात का ध्यान रखते हुए इसे अधिक व्यावहारिक, भाषा कौशल (सुनना, बोलना, पढ़ना और लिखना) आधारित और दैनिक जीवन से जुड़ा हुआ बनाने का प्रयास किया गया है। हम जीवन में मौखिक भाषा का सर्वाधिक प्रयोग करते हैं, अतः इस पाठ्यक्रम में सुनना और बोलना कौशल पर विशेष बल दिया गया है। व्याकरण कहीं पाठ्यक्रम को अधिक बोझिल न बना दे, इसके लिए इसे पाठ-सामग्री में ही समाहित किया गया है। इस रूप में यह पाठ्यक्रम अधिक व्यावहारिक तथा अन्य पाठ्यक्रमों से भिन्न और उपयोगी है।

### LEARNING OUTCOME

भाषिक और साहित्यिक योग्यता का विकास कर उनका प्रयोग कर सकेंगे;  
हिंदी की व्याकरण-सम्मत, समाज-संदर्भित और व्यावहारिक अभिव्यक्ति का विकास कर सकेंगे;  
हिंदी की साहित्यिक-सामाजिक संवेदना की समझ विकसित कर सकेंगे और उसे परंपरा से जोड़ कर प्रस्तुत कर सकेंगे;  
साहित्यिक, प्रयोजनपरक और व्यावहारिक भाषा के विविध रूपों की तुलना कर सकेंगे

### COURSE PLAN

week 1 कविता कैसे पढ़ें  
week 1 रैदास  
week 2 तुलसीदास  
week 2 मीराबाई  
week 3 रहीम  
week 3 गद्य कैसे पढ़ें  
week 4 एक था पेड़ और एक था टूँठ  
week 4 दो कलाकार  
week 5 अच्छा कैसे लिखें  
week 5 सार कैसे करें  
week 6 बिहारी  
week 6 पद्याकार  
week 7 सूर्यकांत त्रिपाठी 'निराला'  
week 7 महादेवी week 8 अनुराधा  
week 8 अनपढ़ बनाए रखने की साजिश

week 9 पीढ़ियां और गिट्टियां  
week 9 कुटज  
week 10 पत्र कैसे लिखें  
week 10 भाव पल्ल वन  
week 11 प्रतिवेदन, टिप्पण और प्रारूपण  
week 11 रामधारी सिंह 'दिनकर'  
week 12 गजानन माधव 'मुक्तिबोध'  
week 12 राजेंद्र उपाध्याय  
week 13 हिंदी कविता की विकास यात्रा  
week 13 क्रोध  
week 14 आखिरी चट्टान  
week 14 जिजीविषा की विजय  
week 15 निबंध कैसे लिखें  
week 15 तालिका, अरेख निर्माण आदि  
week 16 परियोजना कैसे लिखें  
week 17,18,19 उपन्यास

week 20,21 तीन लघुकथाएं  
week 22 सूचना प्रौद्योगिकी : स्वरूप और महत्त्व  
week 22 संचार माध्यम और उनके प्रकार  
week 23 संचार की प्रक्रिया  
week 23 संचार माध्यम के प्रमुख अवयव  
week 24 संचार माध्यम की भाषा  
week 24 वैज्ञानिक दृष्टि और वैज्ञानिक विकास  
week 25 भारतीय विज्ञान  
week 25 जनसंख्या वृद्धि और विज्ञान  
week 26 कंप्यूटर और हिंदी

### ABOUT INSTRUCTOR

#### Qualification:

- M.A. (Mass Communication and Hindi),
- M. Phil. Topic - Gantantra Divas ki Shobha Yatra (Ravindernath Tyagi) : Samvedana or Shilp
- Ph.D., (University of Delhi, Certificate Course in Translation) Topic: Hindi ke Lalit Nibandhon mein Manav Mulya
- P.G. Diploma in Journalism & Mass Communication

#### Areas of Interest/Specialization

- Open and Distance Learning
- Adhunik Hindi Sahitya (Prose and Poetry)

#### Specialization:

- Translation, Editing and Mass Communication

#### Experience:

- Assistant Director since 28 October 2016 at the National Institute of Open Schooling, MHRD, Government of India, NOIDA.
- Academic Officer (Hindi) since July 2009 at the National Institute of Open Schooling, MHRD, Government of India, NOIDA.
- Hindi Officer since November 1999 at the National Institute of Open Schooling, MHRD, Government of India, NOIDA.
- Hindi Translator at Mahanagar Telephone Nigam Ltd. Since September 1996





## DR. RAJENDRA KUMAR NAYAK

Academic Office (Mathematics), NIOS

**TYPE OF COURSE** : Sr.Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 Weeks (1st Aug, 2018 to 31st Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th Passing Certificate and min. age 15 yr

### OBJECTIVE OF COURSE

There are basically four parts of Mathematics course under Swayam platform. These are 1.Text part 2. Audio and Video tutorials 3. Self Assessment 4. Discussion forum

Under text part, all efforts have been made to give related illustrations and sufficient examples for your better understanding. You must go through all solved examples and try to solve all problems under check your progress and Terminal exercises.

Along with text materials, lesson wise video tutorials are also provided for your clarification and better understanding. In some of the lessons concept wise certain audio clips are also provide you. Lesson wise Multiple Choice Questions (MCQs) are provided you after each lesson for the self progress purposes. A discussion forum is also provided to you in this platform, where you can able to share with me your doubts, difficulties and any suggestions. Remember in Swayam platform, one of the important aspects of learning Mathematics is you must have to carefully observe the Videos and practice the quiz items for your self assessment purposes.

### LEARNING OUTCOME

After completing this course, learner will be able to:

describe basic concepts, facts, principles, terms, symbols and processes of Mathematics.

convert the word problems in to the mathematical forms and solve them.

explain different ways of processing the given data and help for arriving at conclusions.

express the skills of quantification of experiences and make linkage with day-today life.

solve wide variety of mathematical problems in daily life and reflect in different context of learning.

relate mathematical knowledge and skills to solve variety of problems and develop positive attitude towards Mathematics and its application.

### COURSE PLAN

**Week 1:** Sets

**Week 2:** Relations and Functions-I

**Week 3:** Trigonometric Functions-I & Trigonometric Functions-II

**Week 4:** Relation between Sides and Angles of a triangle

**Week 5:** Sequences and Series & Some special sequences

**Week 6:** Complex Numbers

**Week 7:** Quadratic Equations and Linear Inequalities & Principle of Mathematical Induction

**Week 8:** Permutations and Combinations & Binomial Theorem

**Week 9:** Cartesian system of rectangular co-ordinates & Straight Lines

**Week 10:** Circles & Conic Sections

**Week 11:** Measures of Dispersion & Random experiments and events.

**Week 12:** Probability

**Week 13:** Matrices

**Week 14:** Determinants & Inverse of a Matrix and its Applications

**Week 15:** Relation and Functions-II Inverse Trigonometric Functions

**Week 16:** Limits and Continuity

**Week 17:** Differentiation

**Week 18:** Differentiation of Trigonometric functions & Differentiation of exponential and Logarithmic functions

**Week 19:** Application of Derivatives

**Week 20:** Integration

**Week 21:** Definite Integrals

**Week 22:** Differential equations

**Week 23:** Introduction to 3-D

**Week 24:** Vectors & Plane

**Week 25:** Straight Line

**Week 26:** Linear Programming Mathematical Reasoning

### ABOUT INSTRUCTOR

Dr. Rajendra Kumar Nayak, M.Sc (Mathematics), M.Ed, Ph.D (Utkal University) presently working as Academic Office (Mathematics) in the Academic Dept., NIOS from 13/07/2012. Before joining of NIOS Dr. Nayak worked as Assistant Professor of Mathematics Education at Regional Institute of Education (NCERT), Bhubaneswar, Army Institute of Education, New Delhi and Ravenshaw University, Cuttack, Odisha.

The Interest area of teaching and learning - Mathematics, Mathematics Education, Educational Statistics, and Distance Education.

Dr. Nayak always believe on research based teaching and experince based learning. Based on this philosophy awarded Ph.D on the topic" Effectiveness of Construcivist Approach on Learning Process and Learning Achivement in Mathematics and Creativity of Primary School Children" from Utkal Univerdity, Odisha.





**MS. SANCHITA BHATTACHARJEE**  
SEO (Painting)

**TYPE OF COURSE** : Sr. Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 6 Months (01/08/2018 to 31/01/2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th Passing Certificate and age 15 yr

### OBJECTIVE OF COURSE

This course is provided with necessary inputs of practical work and skill to the learner's familiarity of the theory of art through the ages. This will further help in aesthetic development, ability to appreciate and discover the beauty of life and integrate it into one's own personality. Thus, art will make more sense to the Cultural Heritage, environment and develop a creative attitude in day-to-day activities. When you will go through this book you will know about the brief introduction and appreciation of Indian Art. In theory part there is detailed and systematic description of Indian art history (early to Modern period) such as Art of Indus Valley Civilization, Art of Mauryan to Gupta period, Ajanta Caves, Mural Painting, Temple Art and Sculpture, Architecture of Indo-Islamic period, Miniature painting of Mughals School, Rajasthan School, Pahari School, Company School, Bengal School and Folk Painting. In practical part we have fundamental of painting, how to draw an object from nature, how to compose Sketching from life and memory and how to do traditional folk painting. In practical paper it is also mentioned that you need to submit Portfolio with 12 original paintings and one sketch book. This course will offer good opportunity to you in your creative and self-expressional development.

### LEARNING OUTCOME

- develop knowledge and understanding of visual art;
- develop skill, ability and aesthetic attitude
- acquaint about the development of art and various styles of art expression and their salient features;
- learn the visual aspects of composition, division of space, rhythm, texture, tonal gradation and expressive value of line;
- work with harmony and contrast of colour, having various drawing and painting materials such as pencils, pastels, water and oil colour, ink etc

### COURSE PLAN

**Week 1L-1** Art of Indus Valley Civilization

**Week 2L-2** Art From Maurya To Gupta Period

**Week 3L-3** Ajanta Caves

**Week 4L-4** Temple Art And Sculpture

**Week 5L-5** Indian Bronzes

**Week 6L-6** Indo- Islamic Architecture

**Week 7L-7** Mughal School

**Week 8L-8** Rajasthani School Of Painting

**Week 9L-9** Pahari School Of Miniature Painting

**Week 10L-10** Deccan School Of Painting

**Week 11L-11** Company School

**Week 12L-12** Pioneers Of Contemporary Art Movements In India

**Week 13L-13** Contemporary Art Of India

**Week 14L-14** Folk Painting

**Painting Practical Syllabus**

**Week 15L-1** Object Drawing

**Week 16L-2** Nature Study

**Week 17L-3** Fundamentals Of Painting

**Week 18L-4** Composition

**Week 19L-5** Sketching From Life And Memory

**Week 20L-6** Folk Art As Motif

### Painting (Practical Guidelines)

#### List of Practical

#### Week 21

1. Study And Draw Basic Shapes And Volume Of Objects In Individual And Group
2. Differentiate between the man made and natural objects.

#### Week 22

3. Use of light and Shade to achieve volume and depth in terms of perspective.
4. Study of rhythm, harmony, balance and texture.

#### Week 23

5. Application of primary, secondary and complementary cool and warm colours according to the need of the composition.
6. Arrangement of forms in pictorial space after assimilation of elements studied.

#### Week 24

7. Create composition to express feelings and emotions.
8. Documentation of visual experience, capture the movement, mood and the characteristics with instant perception

#### Week 25

9. Manifest forms from stored perception of studies of visual experience in the memory.
10. Study the traditional folk motifs. Week 2611. Study of methods and materials of folk art.

### ABOUT INSTRUCTOR

Presently working as a Senior Executive Officer (Performing Arts Education) in National Institute of Open Schooling from July 2001. She holds a master degree M. A. in Drawing and Painting from Maharaja Tomar University, Madhya Pradesh. She has been engaged in the conducting Meeting, Development of Curriculum, Learning Objectives, Study Materials, Audio and Video Material, Marking Schema, Tutor Mark Assignment, Question Item for On Demand Examination and organizing workshops in different parts of the Country in the field of Art and Culture.





## BIJAYALAXMI PRADHAN

senior executive officer(Physics),NIOS

**TYPE OF COURSE** : Sr. Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 Weeks (1st Aug, 2018 to 31st Jan,2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th Passing Certificate and age 15 yr

### OBJECTIVE OF COURSE

Physics is a fundamental science because it deals with the basic features of the world such as time, space, motion, charge, matter and radiation. Study of physics is a means of rationally understanding nature. Physics lies behind all technological advancements, such as computer, internet, launching of rockets and satellites, lasers, etc. It also finds applications in such simple activities of men as lifting a heavy weight or making a long jump. Physics is, thus, an all pervading science and its study helps us in finding answers to whys and hows of our day to day happenings.

Physics course has been so designed that it not only focuses on the basic concepts of Physics but relates them to the daily life activities. The basic themes of Physics which would be of interest to all, particularly to those who are interested in pursuing Physics as a career in life have been selected to form core content of the course. Besides, this course also includes such emerging areas as electronics, communication, nuclear physics which find immense applications in our life.

### LEARNING OUTCOME

After completing this course, the learner will be able to:

develop understanding of concepts, fundamental laws, principles and processes in the area of physics

establish relationship between causes and effects of physical phenomenon

explain the contributions of physics towards improving quality of life

create interest in physics and foster a spirit of enquiry

develop experimental skills like taking observations, manipulation of equipment, and

communicative skills such as reporting of observations and experimental results

develop problem solving ability e.g. analyzing a situation or data, establishing relationship between cause and effect

develop scientific temper of mind by making judgment on verified facts and not opinions, by showing willingness to accept new ideas and discoveries

develop awareness of the dangers inherent in the possible misuse of scientific knowledge.

### COURSE PLAN

**Week 1:** Units, Dimensions and Vectors

**Week 2:** Motion in a Straight Line

**Week 3:** Laws of Motion

**Week 4:** Motion in a Plane & Gravitation

**Week 5:** Gravitation & Work, Energy and Power

**Week 6:** Work, Energy and Power & Motion of a Rigid Body

**Week 7:** Elastic Properties of Solids & Properties of Fluids

**Week 8:** Properties of Fluids

**Week 9:** Kinetic Theory of Gases

**Week 10:** Thermodynamics

**Week 11:** Heat Transfer and Solar Energy & Simple Harmonic Motion

**Week 12:** Wave Phenomena

**Week 13:** Electric Charge and Electric Field

**Week 14:** Electric Potential and Capacitors

**Week 15:** Electric Current

**Week 16:** Magnetism and Magnetic Effect of Electric Current

**Week 17:** Electromagnetic Induction and Alternating Current

**Week 18:** Reflection and Refraction of Light & Dispersion and Scattering of light

**Week 19:** Dispersion and Scattering of light & Wave Phenomena and Light

**Week 20:** Wave Phenomena and Light & Optical Instruments

**Week 21:** Structure of Atom & Dual Nature of Radiation and Matter

**Week 22:** Dual Nature of Radiation and Matter & Nuclei and Radioactivity

**Week 23:** Nuclear Fission and Fusion

**Week 24:** Semiconductors and Semiconducting Devices

**Week 25:** Applications of Semiconductor Devices

**Week 26:** Communication Systems

### ABOUT INSTRUCTOR

Ms. Bijayalaxmi Pradhan is senior executive officer(Physics) in National Institute of Open Schooling(NIOS).Her qualification is M.Sc.(Physics),B.Ed.,PGDDE. She has been involved in various academic activities of Physics subject at senior secondary level and Science and Technology at secondary level in NIOS such as development of question bank,TMA,Video programmes, live audio programmes for webradio etc. She has also experience of teaching of Physics at senior secondary level. She was also involved in research and academic activities in science education in institutions like NCERT and Vigyan Prasara.



**DR. R. N. MEENA**

Designation: Assistant Director (Academic)

**TYPE OF COURSE** : Sr. Secondary  
**INTENDED AUDIENCE** : School

**COURSE DURATION** : 6 Mpnths (01/08/2018 to 31/01/2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th Passing Certificate and min. age 15 yr

**OBJECTIVE OF COURSE**

अस्मिन् स्तरे संस्कृतभाषायाः शिक्षणस्य उद्देश्यानि सन्ति-  
सामान्य-उद्देश्यानि

- संस्कृतभाषायाः संस्कृतवाङ्मयस्य च विषये रुचिवर्धनम्;
- संस्कृतसाहित्यस्य विविधविधानां परिचयः;
- संस्कृतभाषाकौशलेषु दक्षताविकासः;
- राष्ट्रियस्तरे सामाजिक-सांस्कृतिक-वैज्ञानिकाध्यात्मिकसंचेतनाविकासः;
- आचारशुद्धिमाध्यमेन छात्राणां चारित्रिकविकासः।

विशिष्ट-उद्देश्यानि

श्रवणं भाषणाच्च

- छात्राः दैनन्दिनव्यवहारे शिष्टाचारपालने संस्कृतस्य प्रयोगं कुर्युः;
- सरलसंस्कृते प्रश्नं प्रष्टुं समर्थाः भवेयुः;
- सरलसंस्कृतप्रश्नानां मौखिकरूपेण उत्तरदाने समर्थाः भवेयुः;
- वर्णानां शुद्धम् उच्चारणं कर्तुं समर्थाः भवेयुः;

**LEARNING OUTCOME**

- संस्कृतभाषायाः सामान्यज्ञानवर्धनं भविष्यति।
- संस्कृतसाहित्यं प्रति छात्रेषु अभिरुचेः वर्धनम्।
- संस्कृतसाहित्यस्य प्रमुखविधानां प्रतिनिधिचिन्तनां ज्ञानम्।
- छात्रेषु राष्ट्रियसांस्कृतिकसामाजिकनैतिक-मूल्यानां विकासः।
- विज्ञानप्रौद्योगिकीक्षेत्रे प्राचीनभारतीयमनीषिणां योगदानैःपरिचयः।

**COURSE PLAN**

Week 1 thou-lans'k%

Week 2- ;fn tkukfl rn~ on

Week 3- vkjksX;a ijea lq[ke~

Week 4- okpka e.Mua lR;e~

Week 5- vfryksHk% u dÜkZO;%

Week 6- jktrs [kyq dU;kdqekjh

Week 7- ,rn~ mikL;e~

Week 8- ijkFksZ vkReksRlxZ%

Week 9- dkys Qyfr lkSHkkX;e~

Week 10- irfUr ijihMdk%

Week 11- vuqPNSnys[kue~

Week 12- laoknys[kue~

Week 13- o"kZrqZo.kZue~

Week 14- ve`rL; iUFkk%

Week 15- fgeky;ks uke uxkf/kjkt%

Week 16- ekuks fg egrka /kue~

Week 17- dYiukdhfrZ% fot;rs , i;kZoj.kL; laj{k.ke~

Week 18- Øks/kks-uFkZdkjd%, vuUr%KkulKxj%

Week 19- 'kY;fpfdRlktud% lqJqr% ,d"Va U;kL; j{k.ke

Week 20- ân; ifjorZue, i=a fy[kke%

Week 21- ifj;kstuk&fuekZ.ke ,

Week 22- lelkef;da laLÑrlkfgR;e, laLÑrL; iz;kstuewydrk

Week 23- Hkkjrh;KkufoKkuiejEijk, tulxpkjek;/e%

Week 24- laLÑre~vU;k% Hkkjrh;k% Hkk"kk% p , laLÑri=dkfjrk

Week 25- Hkkjrh;laLÑrks laLdkjk% ~if=dkizk:ie~

Week 26- eqnz.k=qfV'kks/kue~

**ABOUT INSTRUCTOR**

Dr. R.N. Meena Completed his M.A., M.Phil., Ph.D. from JNU, New Delhi. He has expertise in Language Learning, Open and Distance Learning, Philosophy and Thoughts, Theater, Screenplay writing for short film and educational videos, Linguistics, Gender, Caste and Tribal Issues.







## BIJAYALAXMI PRADHAN

senior executive officer(Physics),NIOS

**TYPE OF COURSE** : Sr. Secondary  
**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 Weeks (1st Aug, 2018 to 31st Jan,2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years

### OBJECTIVE OF COURSE

- This course has been divided into 10 modules and 32 lessons. First Module is The study of Geography in India. It talks about the development of Geography as a discipline, the approaches of learning geography and its branches.
- The Module 2 is on Changing Face of the Earth. The earth we can see and know is the result of evolution taken place in a very long time. This module helps students to understand the origin and evolution of the earth. It talks about different theories related to the dynamic surface of the earth i.e. isostasy and continental drift.
- Module 3 is The domain of the water on the Earth. As the name refers its talk about oceans, the movement of oceanic water, ocean reliefs and its influence on human and climate.
- 4th Module The Domain of Air on the Earth covers the atmospheric structure and composition, insolation, winds, precipitation and other elements of weather and climate.
- Module 5 talks about The Domain of Life on Earth. It explains the biosphere and life in different biomes. It also let you think about the global climatic changes and its impact on human society. So that we can take a step to achieve sustainable development.
- The next module is The Physical Setting of India. This module has covers the physiography, drainage system and climate of India. It also help you to analyse the natural disaster prone areas in India and efforts to be made to cope up with it.
- Module 7 talks about Natural Resources and their Development in India. This module will help to understand the resources available in India and their wise use and distribution.
- The very next Module is on Economic Activities and Infrastructural Development. It discusses about available resources, their distribution and related economic activities. The module also covers the transport and communication system in India.
- Module 9 covers the Human Resource Development in India. This will help you to analyse the demography of India along with human development index and settlement patterns in India.
- Module 10 is Optional Module. You have to select any one module either Local Area Planning or Geography of Tourism in India.

### LEARNING OUTCOME

- explain the terms, key concepts and basic principles of geography
- explore the processes and patterns of the spatial arrangements of the natural as well as human phenomena
- explain the complex relationship that exists between physical and human environment
- apply geographical knowledge and methods of enquiry to emerging issues and problems at different levels – local, regional, national and global
- develop an understanding of diverse physical resource base, economic activities and regional inequalities in India
- summarize the concept of unity in diversity in India and its demographic structure and recognize the spirit and purpose of geography as a discipline in the modern world.

### COURSE PLAN

**Week 1 :** L-1 and 2: Nature of Geography as a Discipline, Earth's Interior and Its Material

**Week 2 :** L-3: Dynamic Surface of the Earth

**Week 3 :** L-4 and 5: Evolution of Landforms Due To Internal Forces, the Work of Running Water and Underground Water

**Week 4 :** L-6: The Work of Moving Ice, Wind and Sea Wave

**Week 5 :** L-7: Major Landforms and Their Economic Significance

**Week 6 :** L-8: Oceans: Submarine Relief and Water Circulation

**Week 7 :** L-9 and 10: Atmosphere Composition and Structure, Insolation and Temperature

**Week 8 :** L-11: Pressures and Wind

**Week 9 :** L-12 and 13: Humidity and Precipitation, Weather and Climate

**Week 10 :** L-14 and 15: Biosphere, Biomes

**Week 11 :** L-16: India - Physical Features

**Week 12 :** L-17 and 18: Climate of India, Natural Disasters

**Week 13 :** L-19 and 20: Our Resources, Land, Soil and Vegetation Resources In India

**Week 14 :** L-21 and 22: Our Water Resources, Land Use and Agriculture

**Week 15 :** L-23 and 24: Development of Mineral and Energy Resources, Industrial Development

**Week 16 :** L- 25: Transport, Communication and Trade in India

**Week 17 :** L-26: Population Density, Distribution and Growth in India

**Week 18 :** L-27: Population Composition in India

**Week 19 :** L-28: Human Development

**Week 20 :** L-29: Human Settlement

**Week 21 :** Optional Module 10 A Lesson 30/ 10 B Lesson 30

**Week 22 :** Optional Module 10 A Lesson 31/ 10 B Lesson 31

**Week 23 :** Optional Module 10 A Lesson 32/ 10 B Lesson 32

**Week 24 :** Practical Lesson 1 and 2

**Week 25 :** Practical Lesson 3 and 4

**Week 26 :** Practical Lesson 5

### ABOUT INSTRUCTOR

Name : Mr. Vivek Singh

Designation : Sr. Executive Officer (Academic)

Department : Academic Department

MA (Geography) from A.P.S. University, Rewa and MBA (HRM) from Institute of Management Technology-CDL. More than 10 years of experience in Open and Distance Learning. His interest area is Geography, Open and Distance Learning and Basic Education.





**DR. SHWETA VERMA**  
Executive Officer (Academic), NIOS

**TYPE OF COURSE** : Sr. Secondary  
**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years

**OBJECTIVE OF COURSE**

- Psychology is a discipline which is relevant to all walks of life. Its applications to the various areas of personal, organizational and social functioning are well recognized. All of us use various psychological concepts without knowing them. This course at the Senior Secondary level has been designed in such a way that the learners will know the basics of psychology in simple language. Attention has also been paid to the Indian context.
- This field has a large number of opportunities for employment, some of these are:
- Clinical psychologists: Clinical psychologists aim to reduce the distress and improve the psychological wellbeing of their clients.
- Counsellor: As a counselling psychologist one uses psychological theory and research in therapeutic work to help clients with a variety of problems such as difficult life issues and mental health conditions.
- Educational psychologists: Educational psychologists help children or young people who are experiencing problems that hinder their successful learning and participation in school and other activities. These problems can include a range of emotional and social problems or learning difficulties.
- Occupational psychologists: Occupational psychologists apply expert knowledge to all levels of working and may work on organisational issues, such as culture and change, as well as issues at an individual or team level.
- Primary care graduate mental health workers: Primary care graduate mental health workers provide a range of treatments, support and advice to people suffering from common mental health issues, such as anxiety and panic attacks.
- There are other varied options like to work as a rehabilitation counsellor/psychologist, health psychologist, sports psychologist etc

**LEARNING OUTCOME**

- develop an understanding about the basics in psychology for understanding mind and behaviour.
- demonstrate the knowledge and understanding of theory in the areas of learning, memory and problem solving.
- develop an overview of the nature of human development.
- understand self and others for personal growth and development
- adapt effectively in the environment around
- appreciate the importance of planning for career development
- become responsible citizens and serve towards the refinement of society

**COURSE PLAN**

- |   |   |
|---|---|
| <b>Week01</b> : Psychology: Understanding Self and Others             | <b>Week15</b> : Understanding Individual Differences: The Case Of Intelligence                            |
| <b>Week02</b> : How Psychologists Study?                              | <b>Week16</b> : What Is Self?   |
| <b>Week03</b> : Biological and Cultural Shaping Of Mind and Behaviour | <b>Week17</b> : Self and Psychological Processes  |
| <b>Week04</b> : Becoming Aware of the World around Us                 | <b>Week18</b> : Personality Theories, Personality Assessment  |
| <b>Week05</b> : Attention and Perception                              | <b>Week19</b> : Psychological Disorders, Group Processes, Person Perception and Interpersonal Attraction  |
| <b>Week06</b> : Learning Process and Acquiring Skills                 | <b>Week20</b> : Man-Environment Interaction   |
| <b>Week07</b> : Remembering and Forgetting                            | <b>Week21</b> : Psychotherapy, Health Psychology  |
| <b>Week08</b> : Going Beyond the Reality: Thinking and Reasoning      | <b>Week22</b> : Education and Work, Career Development, Vocational Choice And Vocational Adjustment       |
| <b>Week09</b> : Motivation  | <b>Week23</b> : Stress and Your Health, Stress Management and Well-Being                                  |
| <b>Week10</b> : Emotions  | <b>Week24</b> : Developmental Patterns in Early Childhood   |
| <b>Week11</b> : Development: It's Nature                              | <b>Week25</b> : Play Centre: Objectives, Play Centre: Structural Details                                  |
| <b>Week12</b> : Domains of Development                                | <b>Week26</b> : Planning And Conducting Programmes, Involvement of Parents and Community in a Play Centre |
| <b>Week13</b> : Adolescence   |   |
| <b>Week14</b> : Adulthood and Aging                                   |   |

**ABOUT INSTRUCTOR**

A Doctorate of philosophy in Psychology from Himachal Pradesh University. Availed University scholarship during MA in Psychology. I have served various government and non government (NGO) institutions in Himachal Pradesh as Psychologist/Counselor. During my stay with Red Cross Dharamshala(NGO) as a Psychologist I was given an additional responsibility of creating awareness among the Health Workers of Kangra Distt. about the various mental health issues. Besides this I have served as a faculty with Shiva Institute of Engineering and Technology Bilaspur, H.P. and the job role included training and mentoring students for soft skills. Apart from this I have worked with the Lovely Professional University, Jalandhar, Punjab as an Assistant professor in Psychology for quite a long time. I am currently working with NIOS for the past two years where the job role requires to work on the academic activities like standardization of marking scheme in psychology ,developing Tutor Marked Assignments for learners in Psychology etc. Besides this the job role also requires to deliver Personal Contact programme through Mukta Vidya Vani every month and through Swayam Prabha and Swayam Porta also. My passion is to teach and train the learners through various modes of teaching and I believe in learning while teaching. I hope we will have fun learning on this platform. I wish you all a happy learning



**RADHIKA B**

Academic Officer (ICT), NIOS

**TYPE OF COURSE** : Sr. Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years**OBJECTIVE OF COURSE**

- The syllabus of Computer Science for Senior Secondary course developed by NIOS to provide knowledge and understanding of basic components of computer and their working, uses of Internet, C++ programming and problem solving skills.
- This course has two modules. The first module explains about Computer Fundamentals. The second module explains about C++ programming.

**LEARNING OUTCOME**

- identify the basic components of computer and their working; use of operating system
- list the types of computer network
- Use of various services provided by internet
- practice basics of Java programming language
- Use of C++ programming
- State basic concepts of OOP
- Use of control statements in C++ programming
- define library and user defined functions in C++ programming;
- Use of one dimensional and two dimensional arrays
- select members of the class
- explain the concept of inheritance; use pointers in arrays
- Use of files in C++ programming.

**COURSE PLAN****Week 1** - L-1: Anatomy of a Digital Computer**Week 2** - L-2: Data Processing Concept**Week 3** - L-3: Computer Software**Week 4** - L-4: Operating Systems**Week 5** - L-5: Data Communication and Networking**Week 6** - L-6: Fundamentals of Internet and Java Programming

Week 7 - L-7: Introduction to C++

**Week 8** - L-8: General Concept of OOP**Week 9** - L-9: Control Statements**Week 10** - L-10: Functions**Week 11** - L-11: Array**Week 12** - L-12: Structure, Typedef & Enumerated Data Type**Week 13** - L-13: Classes & Objects with Constructors/Destructors**Week 14** - L-14: Inheritance Extending Classes**Week 15** - L-15: Pointer**Week 16** - L-16: Files**Week 17** - L-1 Quiz**Week 18** - L-2 Quiz**Week 19** - L-3 Quiz**Week 20** - L-4, 5 Quiz**Week 21** - L-6, 7 Quiz**Week 22** - L-8, 9 Quiz**Week 23** - L-10, 11 Quiz**Week 24** - L-12, 13 Quiz**Week 25** - L-14, 15 Quiz**Week 26** - L-16 Quiz**ABOUT INSTRUCTOR**

Name: Radhika B

Designation: Academic Officer (ICT), NIOS.

Having post graduation in Master of Computer Applications. Around 7+ years of intensive work experience in various projects and also gained experience and knowledge of the software development processes in the relevant technologies. Last six years associated in the content development of ICT courses in Academic and vocational courses of NIOS





**DR. SANDHYA KUMAR**  
Deputy Director (Academic), NIOS

**TYPE OF COURSE** : Sr. Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years

### OBJECTIVE OF COURSE

Home Science trains the learners in life skills and equips both men and women in in following aspects through 5 modules and 2 optional modules.

1- The Art and Science of Managing Home” focuses on concept of the subject in three lessons.

2: Food and Nutrition details about Food, Nutrition, cooking and Health via six lessons.

3: Resource Management trains in management of Resources, Time, Energy, Income Space, Household Equipments, Environment, Energy and the Consumer.

4: Human Development includes different aspects of growth and development in different stages of life.

5: Textiles and Clothing talks about fibre, yarn, fabric, textile finishes and also the selection and care of fabric.

Two optional modules are meant for choice. One is Housekeeping and second is Creative hand embroidery.

### LEARNING OUTCOME

- develop skills that help in bringing a positive change in daily life style and solving problems; develop creative thinking and a rational approach towards everyday life
- develop scientific temper and a spirit of inquiry
- Sensitivity to values of ethical living.

### COURSE PLAN

**Week 01** : L-1 Home, family and Home science

**Week 02** : L-2 Ethics in daily life, Family and L-3 health and Security

**Week 03** : L-4 Food, nutrition and health and L-5 Meal planning

**Week 04** : L-6 Nutritional status

**Week 05** : L-7 Purchase and storage of food

**Week 06** : L-8 Preparation of food and L-9 Food preservation

**Week 07** : L-10 Family resource management

**Week 08** : L-11 Time and energy management book

**Week 09** : L-12 Space management

**Week 10** : L-13 Income management

**Week 11** : L-14 Energy conservation and L-15 Environment management

**Week 12** : L-16 Household equipment

**Week 13** : L-17 Consumer education

**Week 14** : L-18 Growth and development (0-5 year)

**Week 15** : L-19 Growth and development (6-12 year)

**Week 16** : L-20 Adolescence

**Week 17** : L-21 Concerns and issues in human development

**Week 18** : L-22 Introduction to fabric science and L-23 Yarn and its construction

**Week 19** : L-24 Fabric construction

**Week 20** : L-25 Textile finishes

**Week 21** : L-26 Selection of textiles and clothing

**Week 22** : L-27 Care and maintenance

**Week 23** : Module A, L-28 Introduction to housekeeping and Module A, L-29 Cleaning and cleaning materials

**Week 24** : Module A, L-30 Maintenance of premises and Module A, L-31 Aesthetics at home

**Week 25** : Module B, L-28 Creative hand embroidery and Module B, L-29 The design

**Week 26** : Module B, L-30 Colour, Module B, L-31 Embroidery stitches

### ABOUT INSTRUCTOR

Dr. Sandhya Kumar (Designation: Deputy Director (Academic))

- Ph D (Education), MEd, MSc (Home Science)
- Serving NIOS for more than two decades (15 years as Academic Officer, 5 years as Assistant Director at Regional Center Dehradun,
- Current status as Deputy Director at Head Quarter of NIOS
- intensively involved in organising variety of workshops and conferences etc
- Developed self Learning material ( SLM ) for Home Science, vocational subjects , Quality Assurance Policy of NIOS in collaboration with COL Institution of "Reading Hour" in the Library, SOP etc.
- Initiated many projects in the Academic Department





## DR. SUKANT KUMAR MAHAPATRA

Academic Officer, NIOS, NOIDA

**TYPE OF COURSE** : Sr. Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years

### OBJECTIVE OF COURSE

The world we live in today, is simultaneously shrinking and expanding, growing and under constant pressure for change. The large-scale changes in use of technology, the great increase in the traffic in culture and political and economic changes are the cause of the changes around the world. Understanding these socio-cultural changes requires studying the social world scientifically and developing some understanding of the character of society. Sociology is the scientific study of society & its institutions, social interactions, organizations and groups.

It investigates the practices and processes operating in the society. By observing the broad range of activities in society and getting a space for exploring topics such as family, caste, class, gender, religion, socialization & population dynamics, Sociologists provide a base for in-depth understanding & perspectives on our social order and processes of social change. Sociology provides an important platform which is useful both to personal wellbeing and social development as well. Sociology is among the broadest of the social sciences and thus provides the opportunity for the learners to understand the broad range of the social issues operating in the space between individual, community and society.

### LEARNING OUTCOME

After completing this course, the learner will be able to:

- define basic concepts in Sociology;
- draw generalizations about various social institutions and social divisions in society;
- explain the process of change and development in society in general and with reference to Indian society in particular;
- extrapolate the different dimensions of Indian society; evaluate social realities objectively; and
- develop the ability to perceive social realities scientifically

### COURSE PLAN

**WEEK 01 - L1: AN INTRODUCTION TO SOCIOLOGY**

**WEEK 02 - L2 : EMERGENCE AND DEVELOPMENT OF SOCIOLOGY**

**WEEK 03 - L3 : SOCIOLOGY ITS RELATIONSHIP WITH OTHER SOCIAL SCIENCES**

**WEEK 04 - L4 : METHODS AND TECHNIQUES IN RESEARCH OF SOCIOLOGY**

**WEEK 05 - L5 : SOCIETY COMMUNITY ASSOCIATION AND INSTITUTION**

**WEEK 06 - L6 : SOCIAL GROUP, L7 : SOCIAL STRUCTURE AND SOCIAL SYSTEM**

**WEEK 07 - L8 : NORMS AND VALUES, L9 : STATUS AND ROLE**

**WEEK 08 - L10 : CO-OPERATION COMPETITION AND CONFLICT**

**WEEK 09 - L11 : ACCULTURATION ASSIMILATION AND INTEGRATION**

**WEEK 10 - L12 : MARRIAGE, L13 : FAMILY**

**WEEK 11 - L14 : KINSHIP, L15 : ECONOMY POLITY AND RELIGION**

**WEEK 12 - L16 : SOCIAL STRATIFICATION**

**WEEK 13 - L17 : FACTORS OF SOCIAL CHANGE**

**WEEK 14 - L18 : PROCESSES OF SOCIAL CHANGE, L19 : SOCIALIZATION AS A PROCESS OF LEARNING**

**WEEK 15 - L20 : SOCIAL CONTROL, L21 : SOCIAL DEVIANCE**

**WEEK 16 - L22 : SOCIETY AND ENVIRONMENT**

**WEEK 17 - L23 : INDIAN SOCIAL THINKERS, L24 : UNITY AND DIVERSITY**

**WEEK 18 - L25 : NATIONAL INTEGRATION : CONCEPT AND CHALLENGE, L26 : INDIAN SOCIETY : TRIBAL RURAL AND URBAN**

**WEEK 19 - L27 : CASTE SYSTEM IN INDIA, L28 : MAJOR RELIGIOUS COMMUNITIES IN INDIA**

**WEEK 20 - L29 : MAJOR SOCIAL PROBLEMS OF INDIA**

**WEEK 21 - L30 : PROBLEMS OF SCHEDULED CASTES AND SCHEDULED TRIBES**

**WEEK 22 - L31 : PROBLEMS OF OTHER DEPRIVED SECTIONS**

**WEEK 23 - L32A : STATUS OF WOMEN IN INDIAN SOCIETY : A SOCIO-HISTORICAL PERSPECTIVE OR L32B : CULTURE : CONCEPT AND CHARACTERISTICS**

**WEEK 24 - L33A : GENDER DISCRIMINATION AND GENDER EQUALITY OR L33B : INDIAN CULTURAL HERITAGE**

**WEEK 25 - L34A : PROBLEMS OF WOMEN OR L34B : CULTURAL PLURALISM**

**WEEK 26 - L35A : WOMEN'S EMPOWERMENT AND EMANCIPATION OR L35B : IMPACT OF MEDIA ON CULTURE**

### ABOUT INSTRUCTOR

Dr. Sukanta Kumar Mahapatra is working as an Academic Officer (Sociology) in National Institute of Open Schooling under Ministry of HRD, Government of India. He has teaching experience of more than seven years. He has done his Doctorate from School of Social Sciences, Tata Institute of Social Sciences Mumbai Campus. Dr. Sukanta does the research in Sociology of Education, Pedagogic Theory, Educational Policy and Social Stratification, Open Schooling and E-Learning.



**MANJU CHRUNGU**

Assistant Librarian NIOS, NOIDA

**TYPE OF COURSE** : Sr. Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years**OBJECTIVE OF COURSE**

This course will not only help you use a Library in a more efficient way for your day to day studies, but this will also help you by introducing another option for your further studies, and hence taking up library and information science as a profession. This material is designed in such a way that it can help anybody in using library resources in a better manner for their personal growth or research. The course structure is developed keeping in view needs of the society and learners.

This course is developed in Modular form which includes- four Core Modules and two optional Modules. The four core modules aim to impart comprehensive knowledge on different areas of Library and Information Science. It is compulsory for learners to study all the four Core Modules, you will have the choice to select one out of the two optional modules. Further, the course also includes practical. We would like you to use the modules in the same sequence as the modules are arranged because there are references and cross references in each subsequent lesson.

**LEARNING OUTCOME**

After completing this course, the learner will be able to

- explain information storage, searching and retrieval system
- develop library and information related skills
- inculcate interest in the library and information science to opt this subject as a career; explain various information sources and their use
- organize different sources of information
- develop necessary skills for utilizing the library
- use of ethical information

**COURSE PLAN****WEEK 01 - L1** : LIBRARY AND INFORMATION CENTRES : CONCEPT AND ROLE IN SOCIETY**WEEK 02 - L2** : TYPES OF LIBRARIES AND INFORMATION CENTRES**WEEK 03 - L3** : MODERN LIBRARY: AUTOMATED, DIGITAL & VIRTUAL**WEEK 04 - L4** : FIVE LAWS OF LIBRARY SCIENCE SOURCES**WEEK 05 - L5** : OVERVIEW OF INFORMATION SOURCES**WEEK 06 - L6** : TYPES OF INFORMATION SOURCES**WEEK 07 - L7** : REFERENCE SOURCES**WEEK 08 - L8** : ELECTRONIC RESOURCES**WEEK 09 - L9** : ORGANIZATION OF LIBRARY MATERIAL: CONCEPT, NEED AND PURPOSE**WEEK 10 - L10** : PROCESSING OF LIBRARY MATERIAL: CLASSIFICATION AND CATALOGUING**WEEK 11 - L11** : ARRANGEMENT & MAINTENANCE OF LIBRARY MATERIAL**WEEK 12 - L12** : LIBRARY AND INFORMATION SERVICES FOR THE USERS**WEEK 13 - L13** : TRADITIONAL LIBRARY SERVICES: RESPONSIVE AND ANTICIPATORY**WEEK 14 - L14** : MODERN LIBRARY SERVICES**WEEK 15 - L15** : LIBRARY SYSTEM AND MANAGEMENT**WEEK 16 - L16** : INFORMATION RETRIEVAL SYSTEM: CONCEPT**WEEK 17 - L17** : LIBRARY STAFF**WEEK 18 - L18** : INFORMATION RETRIEVAL TOOLS: CATALOGUES, INDEXES, SUBJECT HEADING LISTS**WEEK 19 - L19** : LIBRARY USERS**WEEK 20 - L20** : SEARCH TECHNIQUES: BASIC AND ADVANCED**WEEK 21 - L21** : LIBRARIANSHIP AS A CAREER**WEEK 22 - L22** : SEARCH TECHNIQUES: WEB BASED SEARCH**WEEK 23 - L23** : PRACTICALS (P1, P2, P3 & P4)**WEEK 24 - L24** : PRACTICALS (P5, P6, P7 & P8)**WEEK 25 - L25** : PRACTICALS (P9, P10, P11 & P12)**WEEK 26 - L26** : PRACTICALS (P13, P14 & P15)**ABOUT INSTRUCTOR**

Manju Chrungu is B.Sc & M.Lib.Sc Qualified. She is having work experience of more than 25 years. Her subject interest is Science and Library Science. Library Science helps you to go through oceans of material. Which helps you to gain knowledge and apply same in different fields.



**DR. MANISH CHUGH**

Academic Officer (Economics) NIOS, NOIDA

**TYPE OF COURSE** : Sr. Secondary**INTENDED AUDIENCE** : School**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years**OBJECTIVE OF COURSE**

Economics has become a very sought-after subject in the field of Social Science. The knowledge of Economics is very important in pursuing various activities in everyday life such as production, consumption and investment. In Consumption, every individual wants to utilize the income in the best possible manner so as to get maximum satisfaction from the goods and services purchased. Similarly, as producer, the individual/firm/industry uses the resources to minimize cost and get maximum output/profit. At the economy level, everybody wants that there should be economic growth and development through higher income and employment. Study of economics is very useful to achieve these goals.

At NIOS, students are introduced to the subject of Economics at Secondary stage. The level at this stage is elementary in nature. However, at the Senior Secondary level, students will be exposed to more areas of economics. They are also expected to know the use of tables and graphs/statistical tools to understand and explain various concepts and theories of economics.

**LEARNING OUTCOME**

After completing this course, the learner will be able to:

- explain how societies, businesses, governments, households and individuals can allocate their scarce resources;
- explain production and distribution of goods and services;
- explain the meaning and functions of money, banks and insurance;
- discuss the challenges and sectoral aspects of Indian economy;

**COURSE PLAN****WEEK 01** - L1 : OVERVIEW OF INDIAN ECONOMY**WEEK 02** - L2 : ECONOMIC PLANNING IN INDIA**WEEK 03** - L3 : ECONOMIC GROWTH & ECONOMIC DEVELOPMENT**WEEK 04** - L4 : THE PROBLEMS OF UNEMPLOYMENT, POVERTY & INEQUALITY**WEEK 05** - L5 : MEANING, SCOPE AND ITS NEED IN ECONOMICS**WEEK 06** - L6 : COLLECTION AND CLASSIFICATION OF DATA

WEEK 07 - L7 : PRESENTATION OF DATA

**WEEK 08** - L8 : MEASURES OF CENTRAL TENDENCY**WEEK 09** - L9 : MEASURES OF DISPERSION**WEEK 10** - L10 : CORRELATION ANALYSIS**WEEK 11** - L11 : INDEX NUMBERS**WEEK 12** - L12 : INTRODUCTION TO THE STUDY OF ECONOMICS**WEEK 13** - L13 : CENTRAL PROBLEMS OF AN ECONOMY**WEEK 14** - L14 : CONSUMER'S EQUILIBRIUM**WEEK 15** - L15 : DEMAND, L16 : INFORMATION RETRIEVAL SYSTEM: CONCEPT**WEEK 16** - L17 : PRODUCTION FUNCTION**WEEK 17** - L18 : COST OF PRODUCTION**WEEK 18** - L19 : SUPPLY, L20 : PRICE ELASTICITY OF SUPPLY**WEEK 19** - L21 : FORMS OF MARKET**WEEK 20** - L22 : PRICE DETERMINATION UNDER PERFECT COMPETITION**WEEK 21** - L23 : REVENUE AND PROFIT MAXIMISATION OF A COMPETITIVE FIRM**WEEK 22** - L24 : NATIONAL INCOME AND RELATED AGGREGATES**WEEK 23** - L25 : NATIONAL INCOME AND ITS MEASUREMENT**WEEK 24** - L26 : CONSUMPTION, SAVING AND INVESTMENT**WEEK 25** - L27 : THEORY OF INCOME DETERMINATION**WEEK 26** - L28 : MONEY AND BANKING, L29 : MONEY AND BANKING**ABOUT INSTRUCTOR**

Dr. Manish Chugh is working as Assistant Director (Acad. Economics) with NIOS. Earlier He has worked with many management colleges & schools. He has been teaching & doing research and consultancy in the area of strategy and economics for the last 12 years. He has been associated with NIOS for last 08 years. Besides MA & PhD in Economics, He is MIB -Gold Medallist. He had the opportunity to act as Programme co-ordinator of PGDBM programme of AIMST Udaipur.





**DR. NEELAM GUPTA**

SEO (EVS) NIOS, NOIDA

**TYPE OF COURSE** : Sr. Secondary

**INTENDED AUDIENCE** : School

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : 10th passing certificate and minimum age 15 years

## OBJECTIVE OF COURSE

Environmental Science is an interdisciplinary academic field that integrates physical, biological and information sciences including but not limited to Ecology, Biology, Physics, Chemistry, Zoology, Mineralogy, Oceanology, Limnology, Soil Science, Geology, Atmospheric Sciences, Geography etc. to the study of the environment and solution of environmental problems. Environmental Sciences emerged from the field of natural history and medicine during the enlightenment. Environmental Science assesses the impact of human activity on the global environment and develop scientific, risk based solutions to help secure and sustainable global environment. It encompasses both the biological and the earth sciences.

The course covers all the major components of the environment including origin and evolution of earth and life, natural resources, ecological principles and population dynamics, pollution, wildlife conservation and impact of individualization. In addition it also addresses related some economic, cultural and ethical aspects which are important to ensure a sustainable future for humans. This course also provides information related to Environmental issues related to sustainable livelihood and human welfare.

Some important topics includes in Environmental Science Senior Secondary course as follows:

1. Origin, Evolution and its uses by humans
2. Principles of Ecology
3. Human settlement and their impact on environment
4. (a) Environmental Pollution and Natural Disasters  
(b) National and Global Environmental Issues
5. Conservation of biodiversity and other natural resources
6. Sustainable development with regards to agriculture and cleaner technology
7. Environmental Management (ethics, legislation and organization related to environment)
- 8A. Water Resource Management
- 8B. Energy and Environment

## LEARNING OUTCOME

After completing this course, the learner will be able to:

- explain how societies, businesses, governments, households and individuals can allocate their scarce resources;
- explain production and distribution of goods and services;
- explain the meaning and functions of money, banks and insurance;
- discuss the challenges and sectoral aspects of Indian economy;

## COURSE PLAN

**WEEK 01** - L1 : ORIGIN OF EARTH AND EVOLUTION OF THE ENVIRONMENT

**WEEK 02** - L2 : ENVIRONMENT AND HUMAN SOCIETY

L3 : DEGRADATION OF NATURAL ENVIRONMENT

**WEEK 03** - L3 : PRINCIPLES OF ECOLOGY

**WEEK 04** - L4 : ECOSYSTEM

**WEEK 05** - L5 : NATURAL ECOSYSTEM

**WEEK 06** - L6 : HUMAN MODIFIED ECOSYSTEMS, L8 : HUMAN SOCIETIES

**WEEK 07** - L9 : DEFORESTATION

**WEEK 08** - L10 : ENVIRONMENTAL POLLUTION

**WEEK 09** - L11 : ENVIRONMENT AND HEALTH

**WEEK 10** - L12 : DISASTERS AND THEIR MANAGEMENT

**WEEK 11** - L13 : NATIONAL ENVIRONMENTAL ISSUES

**WEEK 12** - L14 : GLOBAL ENVIRONMENTAL ISSUES

**WEEK 13** - L15 : BIODIVERSITY CONSERVATION, L16 : CONSERVATION OF OTHER NATURAL RESOURCES

**WEEK 14** - L17 : CONSERVATION OF SOIL AND LAND

**WEEK 15** - L18 : WATER AND ENERGY CONSERVATION

**WEEK 16** - L19 : CONCEPT OF SUSTAINABLE DEVELOPMENT

**WEEK 17** - L20 : MODERN AGRICULTURE

**WEEK 18** - L21 : CONCEPT OF SUSTAINABLE AGRICULTURE

**WEEK 19** - L22 : CLEANER TECHNOLOGIES

**WEEK 20** - L23 : ENVIRONMENTAL LEGISLATION

**WEEK 21** - L24 : ENVIRONMENTAL IMPACT ASSESSMENT

**WEEK 22** - L25 : ENVIRONMENT RELATED INSTITUTIONS AND ORGANISATIONS

**WEEK 23** - L26 : ENVIRONMENTAL ETHICS AND GANDHIAN APPROACH

**WEEK 24** - L27A : GLOBAL CIRCULATION OF WATER OR L27B : IMPORTANCE OF ENERGY IN SOCIETY, L28A : GROUND WATER RESOURCES OR L28B : NON-RENEWABLE SOURCES OF ENERGY

**WEEK 25** - L29A : FRESH WATER RESOURCES OR L29B : RENEWABLE SOURCES OF ENERGY-I, L30A : METHODS OF WATER HARVESTING OR L30B : RENEWABLE SOURCES OF ENERGY-II

**WEEK 26** - L31A : WATER CONSERVATION AT DIFFERENT LEVELS OR L31B : ENERGY CONSERVATION

## ABOUT INSTRUCTOR

Neelam Gupta is M.Sc. (Botany), M.Phil. (Botany), B.Ed. from Agra University, Agra and Certificate course in Russian language from University of Delhi. More than 23 years experience in the field of Open and Distance Education. Area of interest is course development; evaluation strategies; e-content development; training, and Open Basic Education.





**DR. P. K. CHAUHAN**

Senior Executive Officer (Y &amp; N), NIOS

**TYPE OF COURSE** : Vocational  
**INTENDED AUDIENCE** : Skill Enhancement

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Minimum age 14 years and 12th Pass

### OBJECTIVE OF COURSE

‘योग शिक्षक प्रशिक्षण कार्यक्रम’ योग विज्ञान के क्षेत्र में एक महत्वपूर्ण पाठ्यक्रम है। जो लोग योग के क्षेत्र में रुचि रखते हैं या कार्य कर रहे हैं और ‘योग शिक्षक बनने के इच्छुक हैं, उन सभी लोगों को ध्यान में रखते हुए इस पाठ्यक्रम को विकसित किया गया है। यह पाठ्यक्रम यौगिक अभ्यास और योग शिक्षा का गहन ज्ञान प्रदान करता है। भारतीय नागरिकों के साथ - साथ विदेशी नागरिक भी इस पाठ्यक्रम में प्रवेश ले सकते हैं।

भारतीय ज्ञान परम्परा में योग का बहुत महत्व है। प्राचीनकाल से ही योग हमारी जीवन शैली में समाहित रहा है। योग स्वस्थ जीवन जीने की कला है जो मन एवं शरीर के बीच सामंजस्य स्थापित करता है। योग अनुशासन का भी विज्ञान है जो शरीर, मन तथा आत्मशक्ति का सर्वांगीण विकास करता है। आज स्वस्थ एवं चुस्त-दुरुस्त रहने की दृष्टि से योग, सभी को अपनी ओर आकृषित कर रहा है अतः समाज में योग शिक्षा की विशेषरूप से मांग है।

### LEARNING OUTCOME

- योग सिद्धांतों तथा योग क्रिया विज्ञान को समझा सकेंगे
- मानव शरीर विज्ञान और शरीर क्रिया विज्ञान की मूलभूत जानकारी रखने और स्वास्थ्य, स्वच्छता, आहार व यौगिक संस्कृति के अवधारणा पर प्रकाश डाल सकेंगे
- योग के एकीकृत दृष्टिकोण के अनुप्रयोगों को लागू करने, योग कक्षाएं संचालित करने में और शिक्षार्थियों को योग शिक्षा देने में सक्षम हो सकेंगे

### COURSE PLAN

**Week 01** : Chapter-1

**Week 02** : Chapter-1 Contd.

**Week 03** : Chapter-2

**Week 04** : Chapter-2 Contd.

**Week 05** : Chapter-3

**Week 06** : Chapter-3 Contd.

**Week 07** : Chapter-4

**Week 08** : Chapter-4 Contd.

**Week 09** : Chapter-5

**Week 10** : Chapter-5 Contd.

**Week 11** : Chapter-6

**Week 12** : Chapter-6 Contd.

**Week 13** : Chapter-7

**Week 14** : Chapter-7 Contd.

**Week 15** : Chapter-8

**Week 16** : Chapter-8 Contd.

**Week 17** : Chapter-9

**Week 18** : Chapter-9 Contd.

**Week 19** : Chapter-10

**Week 20** : Chapter-10 Contd.

**Week 21** : Revision

**Week 22** : Revision

**Week 23** : Revision

**Week 24** : Revision

**Week 25** : Revision

**Week 26** : Revision

### ABOUT INSTRUCTOR

Dr.P.K.Chauhan is Senior Executive Officer (Y & N) in Vocational Education Department at NIOS. He attained his M.Sc.(Zoology),B.Ed and NDDY(Diploma in Naturopathy & Yoga). He is currently pursuing Masters in Yoga.





MS. KIRTI AILANI

Senior Executive Officer (Health &amp; Paramedical), NIOS

**TYPE OF COURSE** : Vocational  
**INTENDED AUDIENCE** : Skill Enhancement

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Minimum age 14 years and 10th Pass

### OBJECTIVE OF COURSE

यह कोर्स छात्र को कौशल और शिक्षा प्रधान करेगा ताकि छात्र स्वयं नियोक्ता प्राप्त कर सकें। पाठ्यक्रम को पूरा करने के पश्चात, बिस्तर पर पड़े रोगियों को घर पर ही उपचार उपलब्ध कराकर स्व: रोजगार प्राप्त कर पाएगा।

- पंचकर्मा चिकित्सालय
- आयुर्वेदिक हस्पताल
- आयुर्वेदिक आहार केन्द्र
- आयुर्वेदिक हर्बल नर्सरी
- आयुर्वेदिक हर्बल नर्सरी
- जीवन शैली केन्द्र स्वास्थ्य केन्द्र
- स्वास्थ्य स्पा तथा रिसोर्ट
- आयुर्वेदिक कॉस्मेटिक क्लीनिक
- आदि में सहायक के रूप में कार्य कर सकते हैं।

### LEARNING OUTCOME

- मरीज, उपकरण, थेरेपी रूम, दवाओं की तैयारी करके पंचकर्मा के पहले और उसके दौरान चिकित्सक की सहायता करना
- पंचकर्मा थेरेपी से गुजर रहे मरीजों को बुनियादी देखभाल प्रदान करें
- पंचकर्मा से संबंधित परामर्श

### COURSE PLAN

**Week 01** : Chapter-1 पंचकर्मा के सिद्धांत

**Week 02** : Chapter-1 पंचकर्मा के सिद्धांत Contd.

**Week 03** : Chapter-2 स्नेहन और स्वेदन विधि

**Week 04** : Chapter-2 स्नेहन और स्वेदन विधि Contd.

**Week 05** : Chapter-3 वमन और विरेचन विधि

**Week 06** : Chapter-3 वमन और विरेचन विधि Contd.

**Week 07** : Chapter-4 बस्ति विधि

**Week 08** : Chapter-4 बस्ति विधि Contd.

**Week 09** : Chapter-5 नस्य विधि एवं रक्तमोक्षण

**Week 10** : Chapter-5 नस्य विधि एवं रक्तमोक्षण Contd.

**Week 11** : Chapter-6 धारा (पिप्पिलिचिल)

**Week 12** : Chapter-6 धारा (पिप्पिलिचिल) Contd.

**Week 13** : Chapter-7 बाह्य बस्ति (शिरो/जानु/कटि बस्ति आदि)

**Week 14** : Chapter-7 बाह्य बस्ति (शिरो/जानु/कटि बस्ति आदि)

Contd.

**Week 15** : Chapter-8 पोटली स्वेद (पिंड या किषि स्वेदन)

**Week 16** : Chapter-8 पोटली स्वेद (पिंड या किषि स्वेदन) Contd.

**Week 17** : Chapter-9 अभ्यंग, उदर्वतन एवं क्रियाकल्प

**Week 18** : Chapter-9 अभ्यंग, उदर्वतन एवं क्रियाकल्प Contd.

**Week 19** : Chapter-10 विविध पंचकर्मा प्रक्रियाएं

**Week 20** : Chapter-10 विविध पंचकर्मा प्रक्रियाएं Contd.

**Week 21** : Chapter-11 पंचकर्मा में पथ्य-अपथ्य

**Week 22** : Chapter-11 पंचकर्मा में पथ्य-अपथ्य Contd.

**Week 23** : Chapter-12 पंचकर्मा सामग्री

**Week 24** : Chapter-12 पंचकर्मा सामग्री Contd.

**Week 25** : Revision

**Week 26** : Revision

### ABOUT INSTRUCTOR

**Name:** Ms. Kirti Ailani

**Designation:** Senior Executive Officer (Health & Paramedical)

**Experience:** 4.5 yrs as Project Manager cum R&D (Biotechnology)



**DR. NEELIMA PANT**

Academic officer (Agriculture), NIOS

**TYPE OF COURSE** : Vocational  
**INTENDED AUDIENCE** : Skill Enhancement

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)**EXAM DATE** : NA**NO OF CREDITS** : NA**PRE-REQUISITES** : Minimum age 14 years and literate**OBJECTIVE OF COURSE**

देश में मधुमक्खी पालन के विकास की अतिबृहत गुंजाइश है। शहद का वैश्विक उत्पादन लगभग १५% सालाना बढ़ रहा है। वैश्विक उत्पादन का लगभग एक तिहाई हिस्सा एशिया का है जिसमें भविष्य में १५ से २०% की वृद्धि होने की उम्मीद है। लगभग १५ देश वैश्विक उत्पादन में ९०% योगदान देते हैं। प्रमुख शहद उत्पादक देश चीन, भारत, मेक्सिको, यूएसए, अर्जेंटीना, यूक्रेन, तुर्की, रूस हैं। २०१० के बाद से शहद की वैश्विक मांग प्रति वर्ष लगभग १९ हजार टन प्रति वर्ष औसतन बढ़ी है, जिसकी आपूर्ति मुख्य रूप से संयुक्त राज्य अमेरिका द्वारा होती है। २०१५-१६ में पश्चिम बंगाल, उत्तर प्रदेश, पंजाब और बिहार ने देश के शहद उत्पादन में ६१% योगदान दिया। कृषि पर राष्ट्रीय आयोग ने देश में १२ प्रमुख कृषि फसलों को परागण के लिए १५० मिलियन मधुमक्खी उपनिवेशों को तैनात करने की आवश्यकता को देखा। वर्तमान में, उन कृषि फसलों की उपज बढ़ाने के लिए २०० मिलियन मधुमक्खी उपनिवेशों की आवश्यकता है जो २१५ लाख लोगों को रोजगार प्रदान करेगी और १० मिलियन टन शहद का उत्पादन करेगी और फसल उत्पादन में भी वृद्धि होगी।

इस कोर्स को पूरा करने के बाद शिक्षार्थी एक मधुमक्खी पालक / शहद तकनीशियन / शहद पूर्तिकार के रूप में स्व रोजगार अथवा किसी के फार्म में काम कर सकता है।

**LEARNING OUTCOME**

- बेहतर परागण के लिए मधुमक्खियों, उनकी विभिन्न प्रजातियों, उनके जीवन चक्र और व्यवहारिक विज्ञान की जानकारी।
- मधुमक्खी पालन संबंधी विभिन्न उपकरणों की पहचान, प्रदर्शन, रखरखाव और संचालन।
- मौनालय स्थल का चुनाव, मौनालय की स्थापना, प्रबंधन और निरीक्षण के लिए संस्तुत कौशल।
- मौनगृह में नाशीजीव एवं रोग प्रबंधन।
- मौनगृह उत्पादों का उत्पादन, प्रसंस्करण एवं विपणन संबंधित ज्ञान एवं कौशल।

**COURSE PLAN****Week 01** : Chapter-1**Week 02** : Chapter-1 Contd.**Week 03** : Chapter-2**Week 04** : Chapter-2 Contd.**Week 05** : Chapter-3**Week 06** : Chapter-3 Contd.**Week 07** : Chapter-4**Week 08** : Chapter-4 Contd.**Week 09** : Chapter-5**Week 10** : Chapter-5 Contd.**Week 11** : Chapter-6**Week 12** : Chapter-6 Contd.**Week 13** : Chapter-7**Week 14** : Chapter-7 Contd.**Week 15** : Chapter-8**Week 16** : Chapter-8 Contd.**Week 17** : Chapter-9**Week 18** : Chapter-9 Contd.**Week 19** : Chapter-10**Week 20** : Chapter-10 Contd.**Week 21** : Revision**Week 22** : Revision**Week 23** : Revision**Week 24** : Revision**Week 25** : Revision**Week 26** : Revision**ABOUT INSTRUCTOR**

**D.Neelima Pant** is Academic Officer (Agriculture) at NIOS Headquarters for six years. She done her Ph.D. (Vegetable Science) with 'Major in Vegetable Science & Minor in Genetics & Plant Breeding' from G.B. Pant University of Agriculture & Technology, Pantnagar, distt. Udham Singh Nagar (Uttarakhand). Previously, she worked as Post Doctoral Fellow (Horticulture) at Krishi Vigyan Kendra, Ranichauri, Tehri Garhwal from 9<sup>th</sup> August, 2010 to 8<sup>th</sup> February, 2012 and she worked as Senior Research Fellow in the project entitled "Production of Quality Seeds and Planting materials of Vegetables and Spices" from 27<sup>th</sup> November, 2006 to 31<sup>st</sup> October, 2007. Her areas of interest are Agriculture and Animal Husbandry, Horticulture and Vegetable Science.



**DR. PRAVEEN CHAUHAN**

Academic officer (Home Science), NIOS

**TYPE OF COURSE** : Vocational  
**INTENDED AUDIENCE** : Skill Enhancement

**COURSE DURATION** : 26 weeks (1<sup>st</sup> Aug, 2018 to 31<sup>st</sup> Jan, 2019)

**EXAM DATE** : NA

**NO OF CREDITS** : NA

**PRE-REQUISITES** : Minimum age 14 years and literate

**OBJECTIVE OF COURSE**

आज कल के आधुनिक समाज में हम सभी अपने सौन्दर्य को लेकर अधिक जागरूक हो गये हैं। ब्यूटी पार्लर्स, सैलोन, स्पा इत्यादि जाने वाले लोगों में लगातार बढ़ोतरी हो रही है, जिससे सौंदर्य के क्षेत्र में रोजगार के अवसर भी बढ़ रहे हैं। एनएसडीए की एक रिपोर्ट के अनुसार इस क्षेत्र में २०% की दर से सालाना बढ़ोतरी हो रही है। इसलिए व्यावसायिक प्रशिक्षित स्टाफ की आवश्यकता भी बढ़ रही है।

इस पाठ्यक्रम को कर के आप पार्लर में असिस्टेंट ब्यूटीशन के तौर पर कार्य कर सकते हैं। यदि आपका रुझान किसी एक क्षेत्र में ज्यादा है तो आप उसी क्षेत्र में अपना कैरियर बना सकते हैं। जैसे आप नेलआर्ट के लिए अलग से सैलोन स्थापित कर सकते हैं, हेयर स्टाइलिस्ट या मेकअप आर्टिस्ट बन सकते हैं।

**LEARNING OUTCOME**

- You will learn about services like basic skin treatments, removal of superfluous hair, manicure and pedicure, skin and hair service and the art of makeup.
- You will also learn about proper maintenance of work area, care of beauty salon and the art of creating a positive impression at work.
- A basic knowledge of these areas will help you in assisting the beautician in her work in the salon.

**COURSE PLAN**

**Week 01** : Chapter-1

**Week 02** : Chapter-1 Contd.

**Week 03** : Chapter-1 Contd

**Week 04** : Chapter-2

**Week 05** : Chapter-2 Contd.

**Week 06** : Chapter-2 Contd.

**Week 07** : Chapter-3

**Week 08** : Chapter-3 Contd.

**Week 09** : Chapter-3 Contd.

**Week 10** : Chapter-4

**Week 11** : Chapter-4 Contd.

**Week 12** : Chapter-4 Contd.

**Week 13** : Chapter-5

**Week 14** : Chapter-5 Contd.

**Week 15** : Chapter-5 Contd.

**Week 16** : Chapter-6

**Week 17** : Chapter-6 Contd.

**Week 18** : Chapter-6 Contd.

**Week 19** : Chapter-7

**Week 20** : Chapter-7 Contd.

**Week 21** : Chapter-7 Contd.

**Week 22** : Chapter-8

**Week 23** : Chapter-8 Contd.

**Week 24** : Chapter-8 Contd.

**Week 25** : Revision

**Week 26** : Revision

**ABOUT INSTRUCTOR**

**Name:** Dr.Praveen Chauhan

**Designation:** Academic Officer (Home Science)

**Qualification:**

Ph.D (Clothing and Textiles)





**DR. MADHUR BHATIA**

Academic officer in Teacher Education, NIOS

**TYPE OF COURSE** : D.El.Ed  
**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 14 weeks (1<sup>st</sup> Feb, 2018 to 31<sup>st</sup> May, 2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : Untrained Inservice Teacher with Sr.Secondary having minimum 50% Aggregate

**OBJECTIVE OF COURSE**

This course presents an overview of the elementary education at the national and global levels. It is aimed at describing the historical progression of elementary education to help the teachers understand the nature and development of elementary education in a holistic way. This course has been designed based on the needs of the society and varied life experiences to facilitate fair understanding of elementary education in the contemporary Indian society.

Working on the suggested readings and activities given at the end of each unit will provide profound understanding of elementary education.

**LEARNING OUTCOME**

- To develop an understanding of the trends, issues and challenges being faced by elementary education.
- To develop an overview of the universalization of education at the national and international levels.
- To appreciate the role of various initiatives such as, DPEP, SSA, RTE, etc., for universalization of elementary education
- To develop an understanding on the status of elementary education in pre-independence and post- independence periods.

**COURSE PLAN**

**Week 01** : Block 1 UNIT 1 INDIAN EDUCATION SYSTEM -1  
**Week 02** : Block 1 UNIT 1 INDIAN EDUCATION SYSTEM -1 Contd.  
**Week 03** : Block 1 UNIT 2 INDIAN EDUCATION SYSTEM – II  
**Week 04** : Block 1 UNIT 2 INDIAN EDUCATION SYSTEM – II Contd.  
**Week 05** : Block 1 UNIT 3 EDUCATION AS A FUNDAMENTAL RIGHT  
**Week 06** : Block 1 UNIT 3 EDUCATION AS A FUNDAMENTAL RIGHT Contd.  
**Week 07** : Block 1 UNIT 4 ORGANIZATION STRUCTURE FOR UEE  
**Week 08** : Block 1 UNIT 4 ORGANIZATION STRUCTURE FOR UEE Contd.  
**Week 09** : Block 2 UNIT 5 STRATEGIES FOR UEE-I  
**Week 10** : Block 2 UNIT 5 STRATEGIES FOR UEE-I Contd.

**Week 11** : Block 2 UNIT 6 STRATEGIES FOR UEE-II  
**Week 12** : Block 2 UNIT 7 PLANNING AND MANAGEMENT OF UEE  
**Week 13** : Block 3 UNIT 8 PREPARING TEACHERS FOR ELEMENTARY EDUCATION  
**Week 14** : Block 3 UNIT 8 PREPARING TEACHERS FOR ELEMENTARY EDUCATION Contd.  
**Week 15** : Block 3 UNIT 9 EDUCATION OF DISDAVANTAGED STUDENTS  
**Week 16** : Block 3 UNIT 9 EDUCATION OF DISDAVANTAGED STUDENTS Contd.  
**Week 17** : Block 3 UNIT 10 INTERNATIONAL SCENARIOS IN ELEMENTARY EDUCATION

**ABOUT INSTRUCTOR**

**Dr.Madhur Bhatia** is Academic Officer in Teacher Education at NIOS Headquarter for five years.She attained her M.Sc in Botany.She also attained her Ph.D. in Education from Jamia Millia Islamia University, New Delhi.She also done Advanced Diploma in Computer Applications and System Management (DCA). Previously, she worked as TGT (Biology) in C.B Ganj Inter College, Bareilly, and Govt. of U.P. from December, 2005- January, 2011;Visiting Faculty (Education) for B.A. (Prog.) in School of Open Learning (SOL), University of Delhi for session 2011-12 and Assistant Professor, Department of Education, Shyama Prasad Mukherji College for Women, University of Delhi from March, 2011-May, 2012. Her areas of interest are Teacher Education, Educational Technology, Early Childhood Care and Education, Emotional Intelligence, Curriculum Development and Gender issues.





**DR. MANOJ KUMAR THAKUR**  
Research and Evaluation Officer, NIOS

**TYPE OF COURSE** : D.El.Ed  
**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 14 weeks (1<sup>st</sup> Feb, 2018 to 31<sup>st</sup> May, 2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : Untrained Inservice Teacher with Sr.Secondary having minimum 50% Aggregate

### OBJECTIVE OF COURSE

Teacher Education is one of the important components to determine the quality of a teacher. Untrained teachers remains deprived of becoming aware realizing many good qualities of a teacher. Teaching is a profession which requires development of typical the feelings and skills of harnessing the good qualities in a learner.

The crux of all pedagogic efforts is to enhance the quality and extent of learning experience of children within the confines of schooling conditions. With this pedagogic perspective teacher and teaching are considered facilitators and facilitating process of learning.

This course will focus on equipping the prospective teachers with conceptual clarity of pedagogic processes so that they can select and use most appropriate methods and strategies for effective teaching in different contexts. They will assess the children's progress in diverse situations basing on which they shall undertake appropriate modifications in the teaching learning process. Pedagogic study will enable teachers to understand school subjects with specific context of children and process of learning.

### LEARNING OUTCOME

- To help the teachers in understanding the nature of children and the ways the children learn in the school/classroom situations.
- To develop capacities of teachers to reflect, reason and make conceptual understanding of pedagogic practices and learning process.
- To empower teachers to select, integrate and use most appropriate methods and strategies for effective facilitation of learning of children.
- To expose the teachers to different modes of assessment of learning and enable them to uses those effectively to promote classroom learning.
- To acquaint the teachers with the different tools and techniques of ICT available for enriching the learning processes in and out of classroom.

### COURSE PLAN

**Week 01** : Block 1 UNIT 1 LEARNING AND TEACHING DURING EARLY SCHOOLING

**Week 02** : Block 1 UNIT 2 APPROACHES TO LEARNING AND TEACHING

**Week 03** : Block 1 UNIT 3 METHODS OF LEARNING AND TEACHING

**Week 04** : Block 1 UNIT 4 LEARNER AND LEARNING- CENTRED APPROACHES

**Week 05** : Block 2 UNIT 5 MANAGEMENT OF CLASSROOM PROCESSES

**Week 06** : Block 2 UNIT 6 TEACHING AND LEARNING MATERIALS

**Week 07** : Block 2 UNIT 7 MANAGEMENT OF MULTI-GRADE AND MULTI-LEVEL SITUATIONS

**Week 08** : Block 3 UNIT 8 PLANNING LEARNING ACTIVITIES

**Week 09** : Block 3 UNIT 9 INTEGRATED LEARNING AND TEACHING PROCESSES

**Week 10** : Block 3 UNIT 10 CONTEXTUALIZING LEARNING PROCESSES & MATERIALS

**Week 11** : Block 3 UNIT 11 ICT IN LEARNING

**Week 12** : Block 3 UNIT 12 COMPUTER ASSISTED LEARNING

**Week 13** : Block 4 UNIT 13 BASICS OF ASSESSMENT AND EVALUATION

**Week 14** : Block 4 UNIT 14 LEARNING AND ASSESSMENT

**Week 15** : Block 4 UNIT 15 TOOLS AND STRATEGIES OF ASSESSMENT

**Week 16** : Block 4 UNIT 16 USING THE RESULTS OF ASSESSMENT FOR IMPROVING LEARNING

### ABOUT INSTRUCTOR

**Dr. Manoj Kumar Thakur** is Research and Evaluation Officer at NIOS Headquarter. He attained B.A., M.Sc., M.A., B.Ed., and M.Ed. He also attained his Ph.D. in Education. He has eight years of teaching experience B.Ed. (Four years integrated course) at college and university level and BA. His areas of interest are Research in Open Schooling and Distance Education, Curriculum Development, Guidance and Career Counseling, Educational Technology & Measurement and Evaluation.





**CHANCHAL KUMAR SINGH**

Training Officer (Languages/Linguistics/Literature), NIOS

**TYPE OF COURSE** : D.El.Ed  
**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 14 weeks (1<sup>st</sup> Feb, 2018 to 31<sup>st</sup> May, 2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : Untrained Inservice Teacher with Sr.Secondary having minimum 50% Aggregate

**OBJECTIVE OF COURSE**

This course has been developed to enable you to know about various aspects of language. We hope that after completing this course your sensitivity to language will increase and you will become more sensitive learners and teach the language classes in a more pleasant and efficient way.

**LEARNING OUTCOME**

- To enable teachers to grasp general principles in language learning and teaching.
- To develop classroom management skills, procedures and techniques for teaching language.
- To examine issues in language assessment and their impact on classroom teaching.
- To develop competence in teaching languages at the elementary level
- To develop understanding about language – concept, nature, structure, functions, importance.
- To develop insight into the process of language learning and acquisition.
- To develop acquaintance with various approaches, methods and techniques of language teaching.
- To sharpen the skills needed to become an effective language teacher.

**COURSE PLAN**

- |   |   |
|---|---|
| <b>Week 01</b> : Block 1 UNIT 1 WHAT IS LANGUAGE?                     | <b>Week 10</b> : Block 2 UNIT 5 READING Contd.                                  |
| <b>Week 02</b> : Block 1 UNIT 1 WHAT IS LANGUAGE? Contd.              | <b>Week 11</b> : Block 2 UNIT 6 WRITING   |
| <b>Week 03</b> : Block 1 UNIT 2 INDIAN LANGUAGES                      | <b>Week 12</b> : Block 2 UNIT 6 WRITING Contd.                                  |
| <b>Week 04</b> : Block 1 UNIT 2 INDIAN LANGUAGES Contd.               | <b>Week 13</b> : Block 3 UNIT-7 LITERATURE AND LANGUAGE                         |
| <b>Week 05</b> : Block 1 UNIT 3 LANGUAGE LEARNING AND TEACHING        | <b>Week 14</b> : Block 3 UNIT 8 LANGUAGE TEACHING METHODS IN CLASSROOM SETTINGS |
| <b>Week 06</b> : Block 1 UNIT 3 LANGUAGE LEARNING AND TEACHING Contd. | <b>Week 15</b> : Block 3 UNIT 9: EDUCATIONAL MATERIALS: SOME NEW DIMENSIONS     |
| <b>Week 07</b> : Block 2 UNIT 4 LISTENING AND SPEAKING                | <b>Week 16</b> : Block 3 UNIT 10: ASSESSMENT                                    |
| <b>Week 08</b> : Block 2 UNIT 4 LISTENING AND SPEAKING Contd.         |   |
| <b>Week 09</b> : Block 2 UNIT 5 READING                               |   |

**ABOUT INSTRUCTOR**

**Name:** Mr. Chanchal Kumar Singh  
**Designation:** Training Officer (Languages/Linguistics/Literature)  
**Qualification:** M.A., B.Ed., Diploma of Hindi Translator





**DR. RAM SINGH**

Training Officer (Languages/Linguistics/Literature), NIOS

**TYPE OF COURSE** : D.El.Ed  
**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 10 weeks (1<sup>st</sup> Jun, 2018 to 31<sup>st</sup> May, 2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : Untrained Inservice Teacher with Sr.Secondary having minimum 50% Aggregate

**OBJECTIVE OF COURSE**

The revised syllabus of mathematics formulated on the basis of NCF 2005 for the elementary stage of education reflects the recent developments and trends in mathematics education. It emphasizes conceptual understanding, skill proficiencies and thinking skills in the teaching and learning of mathematics. These competencies are integral to the development of mathematical problem solving ability. Emphasis is also need to be given to reasoning, applications, and use of technology. Advances in technology have changed the way we teach and learn mathematics technology.

Students need to have opportunities to discover reason and communicate mathematics. They are required engage in stimulating discussions and activities where they can explore possibilities and make connections. These qualitative changes require a change in the teaching and learning approaches, incorporating activity-based and learner – centered methodologies.

**LEARNING OUTCOME**

- This course will enable the prospective teacher to:
- reflect on the status and issues related to Elementary Mathematics Education.
- attain mastery over the basics of elementary mathematics.
- acquire pedagogical skills of teaching mathematics at elementary stage.
- make effective use of a variety of mathematical tools including technology tools in learning and teaching of mathematics.
- acquire skills of assessing young children's learning and performance in Mathematical concepts and in using those in enhancing their understanding and performance in Mathematics.

**COURSE PLAN**

<b>Week 01</b> :	<b>Week 08</b> : Block 1 UNIT 4 LEARNER AND LEARNING-CENTRED METHODOLOGIES AT ELEMENTARY LEVEL	<b>Week 16</b> : Block 2 UNIT 8 DATA HANDLING
<b>Week 02</b> : Block 1 UNIT 1 HOW CHILDREN LEARN MATHEMATICS	<b>Week 09</b> : Block 1 UNIT 4 LEARNER AND LEARNING-CENTRED METHODOLOGIES AT ELEMENTARY LEVEL Contd.	<b>Week 17</b> : Block 2 UNIT 8 DATA HANDLING Contd.
<b>Week 03</b> : Block 1 UNIT 1 HOW CHILDREN LEARN MATHEMATICS Contd.	<b>Week 10</b> : Block 2 UNIT 5 NUMBERS AND THE OPERATION ON NUMBERS Block 2	<b>Week 18</b> : UNIT 9 ALGEBRA AS GENERALIZED ARITHMETIC
<b>Week 04</b> : Block 1 UNIT 2 MATHEMATICS AND MATHEMATICS EDUCATION	<b>Week 11</b> : Block 2 UNIT 5 NUMBERS AND THE OPERATION ON NUMBERS Contd.	<b>Week 19</b> : UNIT 9 ALGEBRA AS GENERALIZED ARITHMETIC Contd.
<b>Week 05</b> : Block 1 UNIT 2 MATHEMATICS AND MATHEMATICS EDUCATION Contd.	<b>Week 12</b> : Block 2 UNIT 6 SHAPES AND SPATIAL UNDERSTANDING	<b>Week 20</b> : Block 3 UNIT 10 APPROACHES TO ASSESSMENT OF LEARNING MATHEMATICS
<b>Week 06</b> : Block 1 UNIT 3 GOALS AND VISION OF MATHEMATICS EDUCATION Block 1	<b>Week 13</b> : Block 2 UNIT 6 SHAPES AND SPATIAL UNDERSTANDING Contd.	<b>Week 21</b> : Block 3 UNIT 10 APPROACHES TO ASSESSMENT OF LEARNING MATHEMATICS Contd.
<b>Week 07</b> : Block 1 UNIT 3 GOALS AND VISION OF MATHEMATICS EDUCATION Contd.	<b>Week 14</b> : Block 2 UNIT 7 MEASURES AND MEASUREMENTS	<b>Week 22</b> : Block 3 UNIT 11 TOOLS AND TECHNIQUES OF ASSESSMENT
<b>Week 08</b> : Block 1 UNIT 4 LEARNER AND LEARNING-CENTRED METHODOLOGIES AT ELEMENTARY LEVEL		<b>Week 23</b> : Block 3 UNIT 11 TOOLS AND TECHNIQUES OF ASSESSMENT Contd.
		<b>Week 24</b> : Block 3 UNIT 12 FOLLOW UP OF ASSESSMENT OF LEARNING MATHEMATICS

**ABOUT INSTRUCTOR**

**Name:** Dr.Ram Singh

- Member of Quality development of Higher Education, Govt. of Jharkhand.
- Ambassador, Mission knowledge- UNESCO
- Member APEX Body of Academic Committee – NIOS
- Awarded National CBSE Teachers Award- 2015 President, Ranchi Sahodaya School Complex
- Eminent Educationist Award by Hindustan (a leading Media group) in 2012.
- Awarded the prestigious prize for innovations & excellence in school education from ASSCHOM.
- Best Principal Award by Hindustan Media.
- Best Principal Award by Science Olympiad Foundation.
- PRATIBHA SAMAAN 2015 by Prabhat Khabar given by The Honourable Governor of Jharkhand.
- International School Award (ISA) from the British Council 2015-18.
- Avantika Priyadarshani award 2015.







## DR. BABLI CHOUDHURY

Assistant Professor (M.Ed Classes), Gauhati University, Guwahati

**TYPE OF COURSE** : D.El.Ed  
**INTENDED AUDIENCE** : Diploma

**COURSE DURATION** : 14 months (1<sup>st</sup> Feb, 2018 to 31<sup>st</sup> May, 2019)  
**EXAM DATE** : NA  
**NO OF CREDITS** : NA

**PRE-REQUISITES** : Untrained Inservice Teacher with Sr.Secondary having minimum 50% Aggregate

### OBJECTIVE OF COURSE

The present EVS syllabus for primary classes is designed to forge an integrated perspective for the primary stage of schooling that draws upon insights from Science, Social Science and Environmental Education. Environmental education is about helping learners become global citizens with critical thinking skills; sensitivities and respect for the natural environment; and pragmatism towards the socio-economic environment. This Course will help you strengthen your understanding of environment and environmental education. It will also help you to develop a holistic perspective of environment and the significance of environmental studies at the primary stage of education.

Within the formal education system, the curriculum and textbooks provide the vital link between policy and practice; however no learning process can be successful if left only to the curriculum and textbooks. The key to the formal education system is the teacher. Teacher's active participation and innovativeness is crucial for effective teaching and learning to take place. In addition to the subject of 'environment', the Course also deal with a variety of teaching-learning techniques which will help you create a learning environment in your classrooms which is congenial for child-centred and child-driven learning. The Course module has been designed in a way so that it will empower you with new ideas for effective transaction of environmental studies at the primary stage of education. We hope that you will find this Course useful in accomplishing the mission of environmental studies in formal education.

### LEARNING OUTCOME

The Course will enable the Teachers:

- To understand the importance and concept of 'Environment'.
- To develop a holistic perspective of Environment.
- To realize the importance of learning about 'Environment' at the primary level.
- To identify local learning resources and expertise related to teaching-learning of EVS.
- To design appropriate teaching-learning activities for primary children with focus on interactive and experiential learning.
- To assess learning levels of each child, identify learning difficulties and design appropriate strategies for future enrichment.

### COURSE PLAN

**Week 01** : No material

**Week 02** : Block 1 UNIT 1 IMPORTANCE OF ENVIRONMENT AT THE EARLY STAGE OF LEARNING

**Week 03** : Block 1 UNIT 1 IMPORTANCE OF ENVIRONMENT AT THE EARLY STAGE OF LEARNING  
Contd.

**Week 04** : Block 1 UNIT 1 IMPORTANCE OF ENVIRONMENT AT THE EARLY STAGE OF LEARNING  
Contd.

**Week 05** : Block 1 UNIT 2 OBJECTIVES & SCOPE OF TEACHING-LEARNING EVS AT THE PRIMARY STAGE

**Week 06** : Block 1 UNIT 2 OBJECTIVES & SCOPE OF TEACHING-LEARNING EVS AT THE PRIMARY STAGE  
Contd.

**Week 07** : Block 1 UNIT 3 PEDAGOGICAL CONSIDERATIONS OF TEACHING-LEARNING EVS

**Week 08** : Block 1 UNIT 3 PEDAGOGICAL CONSIDERATIONS OF TEACHING-LEARNING EVS Contd.

**Week 09** : Block 1 UNIT 3 PEDAGOGICAL CONSIDERATIONS OF TEACHING-LEARNING EVS Contd.

**Week 10** : Block 1 UNIT 3 PEDAGOGICAL CONSIDERATIONS OF TEACHING-LEARNING EVS Contd.

**Week 11** : Block 1 UNIT 4 CURRICULAR PROVISIONS OF EVS AT THE PRIMARY STAGE

**Week 12** : Block 1 UNIT 4 CURRICULAR PROVISIONS OF EVS AT THE PRIMARY STAGE Contd.

**Week 13** : Block 2 UNIT 5 APPROACHES FOR TEACHING - LEARNING EVS

**Week 14** : Block 2 UNIT 6 METHODS OF TEACHING - LEARNING EVS

**Week 15** : Block 2 UNIT 6 METHODS OF TEACHING - LEARNING EVS Contd.

**Week 16** : Block 2 UNIT 6 METHODS OF TEACHING - LEARNING EVS Contd.

**Week 17** : Block 2 UNIT 6 METHODS OF TEACHING - LEARNING EVS Contd.

**Week 18** : Block 2 UNIT 7 PLANNING TEACHING AND LEARNING OF EVS

**Week 19** : Block 2 UNIT 7 PLANNING TEACHING AND LEARNING OF EVS Contd.

**Week 20** : Block 2 UNIT 7 PLANNING TEACHING AND LEARNING OF EVS Contd.

**Week 21** : Block 2 UNIT 8 RESOURCES AND MATERIALS FOR TEACHING-LEARNING OF EVS

**Week 22** : Block 2 UNIT 8 RESOURCES AND MATERIALS FOR TEACHING-LEARNING OF EVS Contd.

**Week 23** : Block 2 UNIT 8 RESOURCES AND MATERIALS FOR TEACHING-LEARNING OF EVS Contd.

**Week 24** : Block 2 UNIT 8 RESOURCES AND MATERIALS FOR TEACHING-LEARNING OF EVS Contd.

**Week 25** : Block 3 UNIT 9 ASSESSING LEARNING IN EVS

**Week 26** : Block 3 UNIT 9 ASSESSING LEARNING IN EVS Contd.

**Week 27** : Block 3 UNIT 10 TOOLS AND TECHNIQUES FOR ASSESSING LEARNING IN EVS

**Week 28** : Block 3 UNIT 10 TOOLS AND TECHNIQUES FOR ASSESSING LEARNING IN EVS Contd.

**Week 29** : Block 3 UNIT 10 TOOLS AND TECHNIQUES FOR ASSESSING LEARNING IN EVS Contd.

**Week 30** : Block 3 UNIT 11 USING ASSESSMENT RESULTS FOR ENHANCEMENT OF STUDENTS' UNDERSTANDING

**Week 31** : Block 3 UNIT 11 USING ASSESSMENT RESULTS FOR ENHANCEMENT OF STUDENTS' UNDERSTANDING Contd.

### ABOUT INSTRUCTOR

**Name:** Dr.Babli Choudhury

**Designation:** Assistant Professor (M.Ed Classes), Gauhati University, Guwahati

**Qualification:** M.A. in Education, Sociology and Social Work / B.Ed

**Teaching Experience:** 15 Years

**Paper Published:** 30 in National Journals / 20 in International Journals.

Associated with CCRT, NCTE, SCERT Guwahat





स्वयं पढ़ें,  
आगे बढ़ें!



Ministry of Human Resource Development  
Government of India

July 2018

विद्यया ऽ मृतमश्नुते

