



NATIONAL INSTITUTE OF OPEN SCHOOLING

(The Largest Open Schooling System in the World)

विद्याधनम् सर्वधनं प्रधानम्



An Autonomous Institution under Ministry of Human Resource Development, Government of India



NIOS MOOCs COURSES ON SWAYAM (2018-2019)



MHRD MOOCs Platform For Free Online Education

CHAIRMAN'S MESSAGE



The process of education has witnessed changes globally and is undergoing rapid transformation constantly. The focus of educational process has shifted from the teacher to the learner. Education is now learner centric instead of what it has traditionally been teacher centric. A large number of adolescents decide to pursue education not through the classroom teaching process but on their own, at their own pace & place, and learn through on-line courses and recorded lectures available on the internet. The advent and ready availability of communication technologies have made it possible for institutions to offer online courses for interested learners.

Massive Open Online Courses (MOOCs) are free online courses available for anyone to enrol. MOOCs provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale.

“Study Webs of Active Learning for Young Aspiring Minds” (SWAYAM) is a MOOCs platform programme initiated by Ministry of Human Resource Development, Government of India and designed to achieve the 3 cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.

The National Institute of Open Schooling (NIOS) is one of the nine National Coordinators which have been assigned a specific sector for preparation of online courses for SWAYAM. NIOS is developing online courses at school level for out of school learners and Elementary Teacher Education.

There are 44 courses of NIOS being offered on SWAYAM Platform - 14 at Secondary level, 16 at Sr. Secondary level, 4 Vocational courses and 10 courses of Diploma in Elementary Education (D.El.Ed.)

The NIOS MOOCs courses on SWAYAM platform are offered following the 4 quadrant approach namely (i) e-Tutorials containing best quality audio/video lectures and multi-media instructions. (ii) e-Content having self-instructional materials in PDF/downloadable e-Books. (iii) Discussion Forum and Web Resources where learners can have peer and course coordinator interaction for raising and clearing doubts along with related web links, Wikipedia, OER. (iv) Self-Assessment where the learners can assess themselves by MCQ, Quizzes, assignments etc.

The learning on SWAYAM is absolutely free for all citizen of India. SWAYAM is a programme of the Govt. of India for making the availability of education from school level to higher education including technical education at one MOOCs platform.

This e-Book is an introductory of all the NIOS courses being offered on SWAYAM platform along with the brief of the Course Coordinator. This will help all in the understanding of the courses one wishes to go for.

Wishing all from the NIOS fraternity.

**(Prof. Chandra B. Sharma)
Chairman, NIOS**

About NIOS MOOCs for SWAYAM

The National Institute of Open Schooling (NIOS) is an autonomous institution under Ministry of Human Resource Development, Government of India established in 1989. NIOS provides opportunities to interested learners by making available the following courses/programmes of study through open and distance learning (ODL) mode:

- ◆ Elementary Education through its Open Basic Education (OBE) programme
- ◆ Secondary Education (Class 10th)
- ◆ Senior Secondary Education (Class 12th)
- ◆ Vocational Education
- ◆ Life Enrichment &
- ◆ Elementary Teacher Education

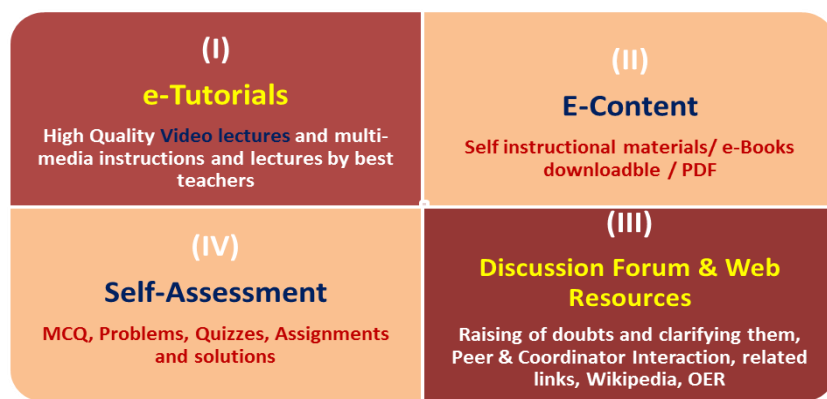
NIOS operates through a network of five Departments, 22 Regional Centres and more than 6500 & Accredited Institutions (Study Centres) in India and abroad. It has a current cumulative enrolment of about 2.82 million learners during last five years with an annual enrolment of about 550 thousands at Secondary, Senior Secondary and Vocational levels which makes it the largest open schooling system in the world.

The openness and flexibility in education is key to educational programmes of NIOS. There is no upper age for admission in NIOS. Freedom of choice of subjects, self-learning study materials, transfer of credits and flexible examination system with ICT based On-Demand Examination (ODES) System are some of learner centric facilities being provided by NIOS. With the advent of ICT, NIOS is moving towards digital and online learning for open learning system.

Massive Open Online Courses (**MOOCs**) are free online courses available for anyone to enrol. **MOOCs** provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale.

"Study Webs of Active Learning for Young Aspiring Minds" (**SWAYAM**) is a MOOCs platform programme initiated by Ministry of Human Resource Development, Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity & quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.

SWAYAM uses 4 quadrant approach : the 4 Quadrant approach means e-learning system that has following components:



In order to ensure best quality content are produced and delivered MHRD has appointed nine National Coordinators viz UGC, NPTEL, CEC, IGNOU, NCERT, NIOS, IIMB, NITTTR & AICTE which have been assigned a specific sector for preparation of online courses for SWAYAM.

There are 44 courses of NIOS being offered on SWAYAM Platform – 14 at Secondary level, 16 at Sr. Secondary level, 4 Vocational courses and 10 courses of Diploma in Elementary Education (D.El.Ed.)

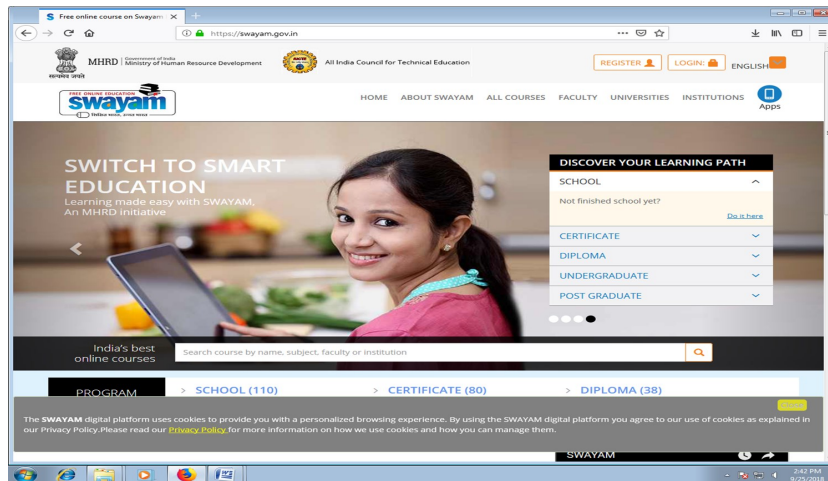
With the 13.78 lakhs teachers being enrolled on SWAYAM, it has become the world's largest MOOC platform having largest number of enrolment in a particular course.

**SWAYAM
REGISTRATION /
LOGIN / ENROLL
FOR ANY SUBJECT**

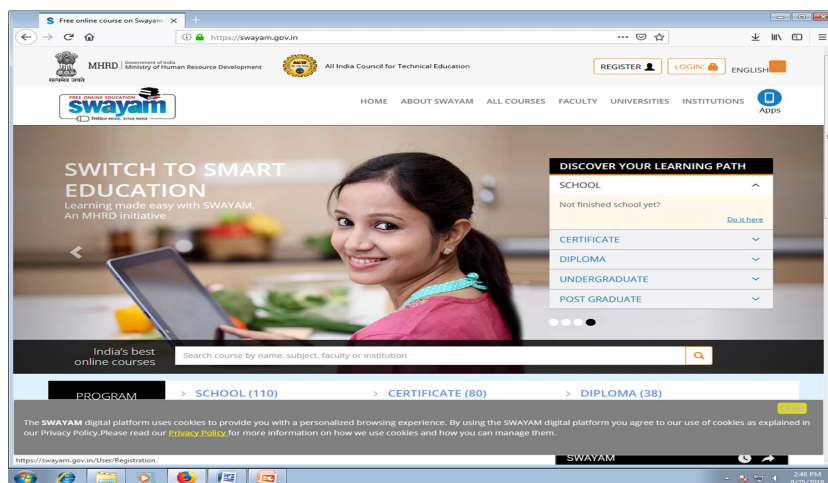


STEPS TO REGISTER/ENROL ON SWAYAM PORTAL

Step -1 : Type URL- swayam.gov.in



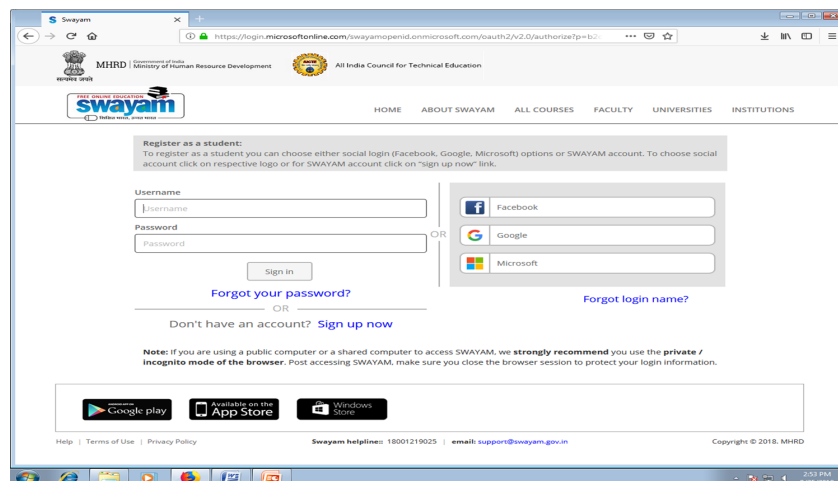
Step - 2 : Click on Register - Right hand side top corner.



Step - 3 : Registration can be done in two ways

1. Sign up
2. Use Existing Facebook / Google Account / Microsoft account

For Registering through Google account - Click on Google, It will redirect to Gmail account login then enter existing Gmail account credentials.



TO BE CONTINUED...

Step - 4 : Following screen will appear with Gmail account details, Click on CONTINUE.

The screenshot shows the Swayam login page. At the top, there are logos for MHRD (Ministry of Human Resource Development) and All India Council for Technical Education. The page has a navigation menu with links for HOME, ABOUT SWAYAM, ALL COURSES, FACULTY, UNIVERSITIES, and INSTITUTIONS. The main content area contains a form with the following fields: Surname (Deled), Given Name (Deled), Display Name (Deled Deled), and Email Address (deledhq1@gmail.com). Below the form are two buttons: CONTINUE and CANCEL. At the bottom, there are logos for Google Play, App Store, and Windows Store, along with a footer containing help links, terms of use, privacy policy, and contact information.

Step - 5 : Fill basic profile, all the fields are compulsory and then click SAVE & CONTINUE.

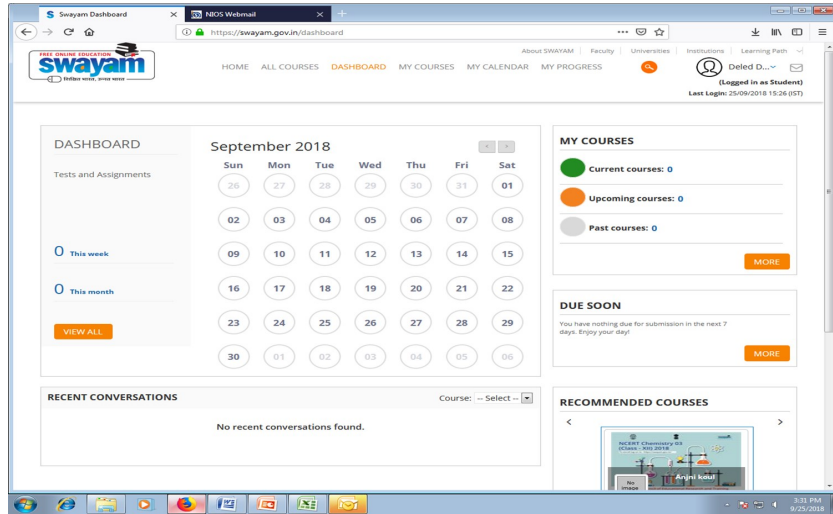
The screenshot shows the 'Basic Profile' page on the Swayam portal. The page title is 'UPDATE YOUR PROFILE'. The form contains several sections: Gender (radio buttons for Male, Female, Third Gender), Learning Objective (radio buttons for For Learning, For Certification), What would you like to learn? (dropdown menu), Phone number (Home or mobile or office) (text input with a country code dropdown), Age Group (dropdown menu), Highest level of education completed (dropdown menu), Occupation (dropdown menu), Country (dropdown menu), State (dropdown menu), Security Question (dropdown menu), and Security Answer (text input). At the bottom of the form are two buttons: SAVE & CONTINUE and CLEAR ALL. The page also shows a user is logged in as a student with the last login time of 25/09/2018 15:26 (IST).

Step - 6 : Click on I agree.

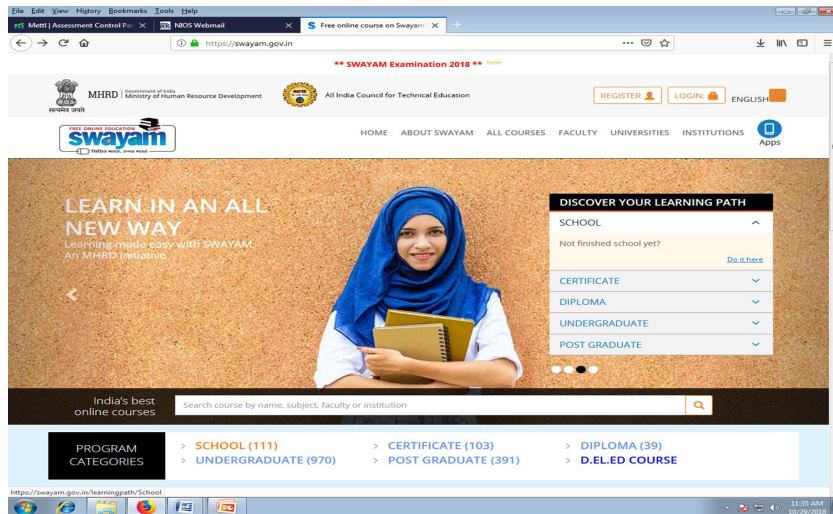
The screenshot shows the 'Basic Profile' page with a 'SWAYAM agreement' dialog box overlaid. The dialog box contains the following text: 'ALL INDIA COUNCIL FOR TECHNICAL EDUCATION SWAYAM PLATFORM', 'Code of Conduct & Etiquettes for the SWAYAM User registration', and a paragraph of text explaining the guidelines for users. At the bottom of the dialog box are two buttons: I agree and I don't agree. The background page shows the same form as in the previous screenshot, but the 'What would you like to learn?' dropdown menu is now set to 'School'.

TO BE CONTINUED..

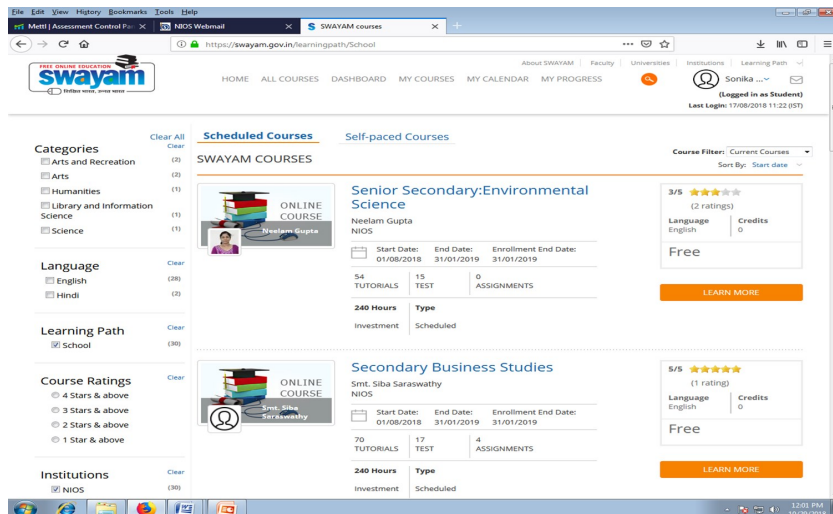
Step - 7 : You have successfully registered, you will also receive a mail on your Email id.



Step - 8 : Click on Home tab → Scroll down and click on School.

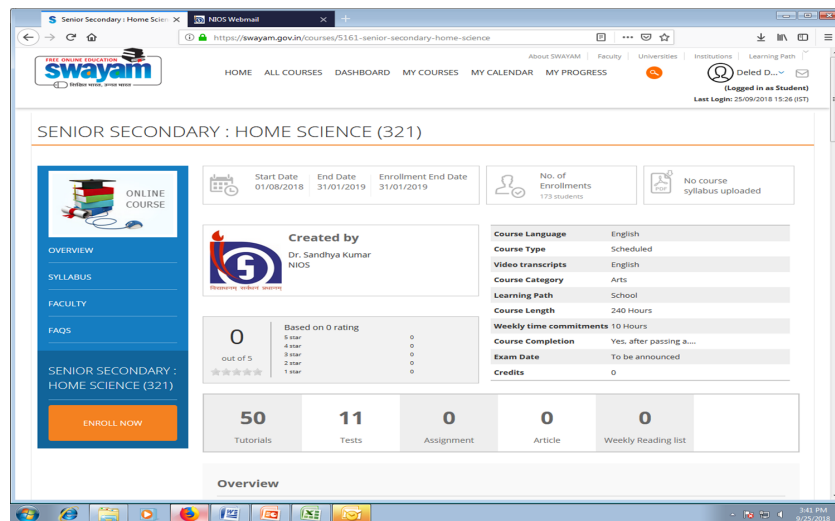


Step - 9 : On Right hand side, Click on Course Filter & Select Current Course → On Left hand side under institution Select NIOS.

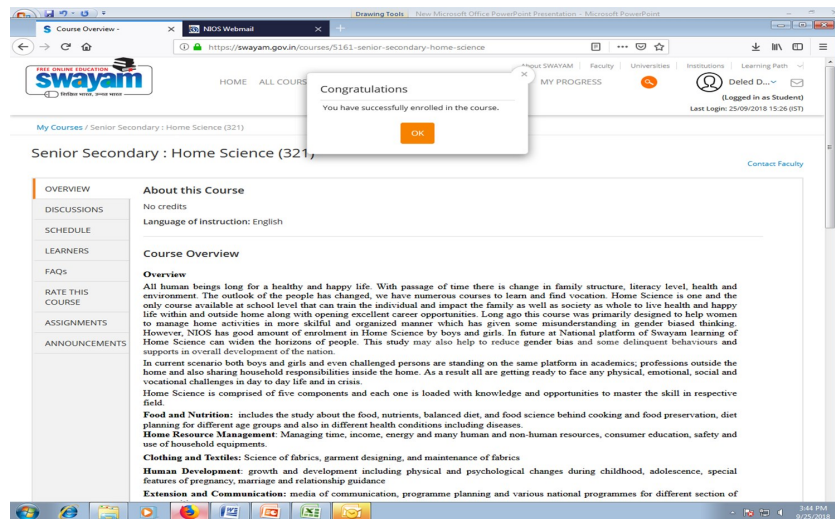


TO BE CONTINUED...

Step - 10 : Click on any course of your choice to enroll - for an example click Senior Secondary Home Science → Click [ENROLL NOW](#).



Step - 11 : A Pop up message will appear that you have successfully enrolled in course, you will also receive a mail on registered Email id. Click [OK](#).



Step - 12 : For enrolling in multiple courses, Repeat step 10 and step 11.



SECONDARY COURSE



SECONDARY SUBJECTS

- 1 HINDI
- 2 ENGLISH
- 3 SANSKRIT
- 4 MATHEMATICS
- 5 SCIENCE & TECHNOLOGY
- 6 SOCIAL SCIENCE
- 7 ECONOMICS
- 8 BUSINESS STUDIES
- 9 HOME SCIENCE
- 10 PSYCHOLOGY
- 11 INDIAN CULTURE & HERITAGE
- 12 ACCOUNTANCY
- 13 PAINTING
- 14 DATA ENTRY OPERATIONS

HINDI

(COURSE CODE : 201)



Dr. B.K. Rai
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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।

ABOUT INSTRUCTOR

Dr. B.K. Rai is Assistant Director (Academics) at NIOS Headquarter since 28th October 2016. He attained M.A. in Mass Communication & Hindi. He also attained M.Phil. (Topic : Gantantra Divas ki Shobha Yatra [Ravindernath Tyagi]: Samvdana 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).

LEARNING OUTCOME

The learner will be able to:

- Hindi Language and Literature Learning
- Proficiency in Hindi
- Development of Expression in Hindi

COURSE PLAN

WEEK 01	L1 : बहादुर
WEEK 02	L2 : दोहे
WEEK 03	L3 : गिल्लू
WEEK 04	L4 : आह्वान
WEEK 05	L5 : राबर्ट नर्सिंग होम में
WEEK 06	L6 : भारत की ये बहादुर बेटियाँ
WEEK 07	L7 : आजादी
WEEK 08	L8 : चन्द्रगहना से लौटती बेर
WEEK 09	L9 : अखबार की दुनिया
WEEK 10	L10 : पढ़ें कैसे
WEEK 11	L11 : सार कैसे लिखें
WEEK 12	L12 : इसे जगाओ
WEEK 13	L13 : सुखी राजकुमार
WEEK 14	L14 : बूढ़ी पृथ्वी का दुख
WEEK 15	L15 : अँधेर नगरी
WEEK 16	L16 : अपना पराया
WEEK 17	L17 : बीती विभावरी जाग री
WEEK 18	L18 : नाखून क्यों बढ़ते हैं
WEEK 19	L19 : शतरंज के खिलाड़ी
WEEK 20	L20 : उनको प्रणाम
WEEK 21	L21 : पत्र कैसे लिखें
WEEK 22	L22 : निबंध कैसे लिखें
WEEK 23	पुनः अवलोकन
WEEK 24	पुनः अवलोकन
WEEK 25	पुनः अवलोकन
WEEK 26	पुनः अवलोकन

ENGLISH

(COURSE CODE : 202)



Dr. Saumya Rajan
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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.

The syllabus for the Secondary Course in English will aim at developing the following skills in the learners:

- A. Listening skills, speaking skills, reading skills, writing skills and
- B. Other Communication skills, Study Skills, Literary skills
- C. This course will also focus on -
Elements of language - grammar and usage, vocabulary

ABOUT INSTRUCTOR

Saumya Rajan is currently working as Regional Director, National Institute of Open Schooling Regional Office, Pune, Ministry of Human Resource Development, Government of India. She is a D.Phil. in English Literature from the University of Allahabad and trained in Incorporating Gender Concerns in Public Policy from the Indian Institute of Public Administration, New Delhi, India. She is certified in Global Diplomacy- Diplomacy in the Modern World from the University of London and SOAS, University of London.

She has availed National and Central Research Scholarships for her academic excellence. A Gold Medalist right from her school to university, she has been widely published in international journals and magazines of repute. Her books - *Common Shadows*, *Guerilla Ignition*, USA and *New World Order of Postmodernism in the Plays of Harold Pinter : Pause at Play*, Penguin-Partridge, UK- are out for English literature enthusiasts.

She can be reached at www.saumyarajan.com, www.saumyarajanspaces.blogspot.com and rajansaumyanios@gmail.com.

LEARNING OUTCOME

The learner will be able to:

- 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 the 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 01	L1 : Snake Bite
WEEK 02	L2 : How the Squirrel Got His Stripes
WEEK 03	L3 : Kondiba - A Hero
WEEK 04	L4 : Tall Trees
WEEK 05	L5 : A Tiger Comes to Town-I
WEEK 06	L6 : A Tiger Comes to Town-II
WEEK 07	L7 : The Shoeshine
WEEK 08	L8 : A Birthday Letter
WEEK 09	L9 : Nine Gold Medals
WEEK 10	L10 : Noise: How It Affects Our Lives
WEEK 11	L11 : My Elder Brother
WEEK 12	L12 : Indian Weavers
WEEK 13	L13 : The Last Stone Mason
WEEK 14	L14 : Stealing and Atonement
WEEK 15	L15 : My Vision for India
WEEK 16	L16 : My Only Cry
WEEK 17	L17 : Caring for Others
WEEK 18	L18 : The Little Girl
WEEK 19	L19 : A Prayer for Healing
WEEK 20	L20 : New Good Things from Rubbish
WEEK 21	L21 : The Village Pharmacy
WEEK 22	L22 : The Truth
WEEK 23	L23 : The Return of the Lion
WEEK 24	L24 : Co-operate and Prosper
WEEK 25	L25 : Once Upon a Time
WEEK 26	L26 : Ustad Bismillah Khan L27 : The Parrot Who Wouldn't Talk

SANSKRIT

(COURSE CODE : 209)



Dr. R.N. Meena
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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।

ABOUT INSTRUCTOR

Dr. R.N. Meena is Assistant Director (Academics) at NIOS Headquarter, Noida. He completed his M.A., M.Phil., Ph.D. from JNU, New Delhi. He is expertise in Language Learning, Open and Distance Learning, Philosophy and Thoughts, Theatre, Screenplay writing for short film and educational videos, Linguistics, Gender, Caste and Tribal issues.

LEARNING OUTCOME

- संस्कृतभाषायाः सामान्यज्ञानवर्धनं भविष्यति ।
- संस्कृतसाहित्यं प्रति छात्रेषु अभिरुचेः वर्धनम्।
- संस्कृतसाहित्यस्य प्रमुखविधानां प्रतिनिधिचिन्तनां ज्ञानम्।
- छात्रेषु राष्ट्रियसांस्कृतिकसामाजिकनैतिक-मूल्यानां विकासः।
- विज्ञानप्रौद्योगिकीक्षेत्रे प्राचीनभारतीयमनीषिणां योगदानैः परिचयः।

COURSE PLAN

WEEK 01	L1 : सुभाषितानि
WEEK 02	L2 : प्रेरणा
WEEK 03	L3 : त्याज्यं न धैर्यम्
WEEK 04	L4 : कस्मात् किं शिक्षेत
WEEK 05	L5 : प्राणस्य श्रेष्ठत्वम्
WEEK 06	L6 : यद्भविष्यो विनश्यति
WEEK 07	L7 : अयोध्यां प्रत्यागमनम्
WEEK 08	L8 : विरहकातरं तपोवनम्
WEEK 09	L9 : भारतीयविज्ञानम्
WEEK 10	L10 : प्रहेलिका
WEEK 11	L11 : रचनाकौशलम्
WEEK 12	L12 : यक्ष - युधिष्ठिर संवाद
WEEK 13	L13 : करुणापरा हि साधवः
WEEK 14	L14 : शरीरमाध्यं खलु धर्मसाधनम्
WEEK 15	L15 : ईशः क्व अस्ति
WEEK 16	L16 : गीतामृतम्
WEEK 17	L17 : स्वस्तिपन्थामनुचरेम
WEEK 18	L18 : कर्तव्यनिष्ठा
WEEK 19	L19 : पुत्रोहं पृथिव्याः
WEEK 20	L20 : सत्याग्रहाश्रमः
WEEK 21	L21 : तेजसां हि न वयः समीक्ष्यते
WEEK 22	L22 : पत्रलेखनम्
WEEK 23	पुनर्निरीक्षणम्
WEEK 24	पुनर्निरीक्षणम्
WEEK 25	पुनर्निरीक्षणम्
WEEK 26	पुनर्निरीक्षणम्

MATHEMATICS

(COURSE CODE : 211)



Dr. Rajendra Kumar Nayak
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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 6 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.

ABOUT INSTRUCTOR

Dr. Rajendra Kumar Nayak is Academic Officer (Mathematics) at NIOS for 6 years. He has 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 the Education at Ravenshaw University, Cuttack from 2nd May, 2011 to 10th July, 2012; He has also 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 the Education at Army Institute of Education, Delhi Cantt, New Delhi from 1st October, 2009 to 31st May, 2010 and worked as Research fellow in the 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 & Evaluation, Teacher Education and Distance Education.

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	L1 : Number Systems
WEEK 02	L2 : Exponents and Radicals
WEEK 03	L3 : Algebraic Expressions and Polynomials
WEEK 04	L4 : Special Products and Factorization
WEEK 05	L5 : Linear Equations
WEEK 06	L6 : Quadratic Equations
WEEK 07	L7 : Arithmetic Progression
WEEK 08	L8 : Percentage and its Applications
WEEK 09	L9 : Instalment Buying
WEEK 10	L10 : Lines and Angles
WEEK 11	L11 : Congruence of Triangles
WEEK 12	L12 : Concurrent Lines
WEEK 13	L13 : Quadrilaterals
WEEK 14	L14 : Similarity of Triangles
WEEK 15	L15 : Circles
WEEK 16	L16 : Angles in a Circle and Cyclic Quadrilateral
WEEK 17	L17 : Secants, Tangents and their Properties
WEEK 18	L18 : Constructions
WEEK 19	L19 : Co-ordinate Geometry
WEEK 20	L20 : Perimeter and Area of Plane Figures
WEEK 21	L21 : Surface Area and Volume of Solid Figures
WEEK 22	L22 : Introduction to Trigonometry
WEEK 23	L23 : Trigonometric Ratios of Some Special Angles
WEEK 24	L24 : Data and their Representation
WEEK 25	L25 : Measures of Central Tendency
WEEK 26	L26 : Introduction to Probability

SCIENCE AND TECHNOLOGY

(COURSE CODE : 212)



Dr. Sanghmitra Suryapani
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

There are 32 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.

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 has also done her Ph.D. in Botany from Jamia Hamdard University, New Delhi. She has 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.Pharma) 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 interests are Plant Ecology, Plant Physiology, Plant Biotechnology, Environmental Biology and Open and Distance Learning.

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	L1 : Measurement in Science & Technology
WEEK 02	L2 : Matter in Our Surroundings
WEEK 03	L3 : Atoms and Molecules
WEEK 04	L4 : Chemical Reaction & Equations
WEEK 05	L5 : Atomic Structure
WEEK 06	L6 : Periodic Classification of Elements
WEEK 07	L7 : Chemical Bonding
WEEK 08	L8 : Acid, Bases and Salts
WEEK 09	L9 : Motion and its Description
WEEK 10	L10 : Force and Motion
WEEK 11	L11 : Gravitation
WEEK 12	L12 : Sources of Energy
WEEK 13	L13 : Work and Energy L14 : Thermal Energy
WEEK 14	L15 : Light Energy L16 : Electrical Energy
WEEK 15	L17 : Magnetic Effects of Electric Current L18 : Sound and Communication
WEEK 16	L19 : Classification of Living Organisms L20 : History of Life on Earth
WEEK 17	L21 : Building Blocks of Life - Cells & Tissues L22 : Life Process I Nutrition, Transportation, Respiration & Excretion
WEEK 18	L23 : Life Processes II Control and Coordination L24 : Life Processes III Reproduction
WEEK 19	L25 : Heredity
WEEK 20	L26 : Air and Water
WEEK 21	L27 : Metal and Non-metals
WEEK 22	L28 : Carbon and its Compounds
WEEK 23	L29 : Natural Environment
WEEK 24	L30 : Human Impact on Environment
WEEK 25	L31 : Food Production and Animal Husbandry
WEEK 26	L32 : Health and Hygiene

SOCIAL SCIENCE

(COURSE CODE : 213)



Ms. Tarun
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

Social Science involves the study of human society which makes us familiar with evolution of human society and covers the major civilizations 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 mutually reinforcing relationship between the State and 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 & able to identify, understand and fulfil own role for making a positive contribution towards nation building.

ABOUT INSTRUCTOR

Ms. Tarun is an 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 Centre, 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 31st Dec 2010 to till now.
- Academic Consultant (Full Time, against the post of Assistant Regional Director) in IGNOU, Regional Centre, Karnal, Haryana, India from 10th May to 29th Dec 2010.
- Lecturer (on Temporary basis) of Geography in KVA DAV College for Women, Karnal, Haryana, India from 21th July 2009 to 20th March 2010.
- Lecturer (as a guest faculty) of Disaster Management in Govt. College for Women, Karnal, Haryana, India from Nov 2008 to March 2009.

LEARNING OUTCOME

The learner will be able to:

- 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	L0 : Introduction to Social Science L1 : Ancient World
WEEK 02	L2 : Medieval World
WEEK 03	L3 : Modern World - I
WEEK 04	L4 : Modern World - II
WEEK 05	L5 : Impact of British Rule on India: Economic, Social and Cultural
WEEK 06	L6 : Religious and Social Awakening in Colonial India
WEEK 07	L7 : Popular Resistance to The British Rule
WEEK 08	L8 : Indian National Movement
WEEK 09	L9 : Physiography of India
WEEK 10	L10 : Climate
WEEK 11	L11 : Bio-Diversity
WEEK 12	L12 : Agriculture in India
WEEK 13	L13 : Transport and Communication
WEEK 14	L14 : Population Composition
WEEK 15	L15 : Constitutional Values and Political System in India
WEEK 16	L16 : Fundamental Rights and Fundamental Duties
WEEK 17	L17 : India - A Welfare State
WEEK 18	L18 : Local Governments and Field Administration
WEEK 19	L19 : Governance at the State Level
WEEK 20	L20 : Governance at the Union Level
WEEK 21	L21 : Political Parties and Pressure Groups
WEEK 22	L22 : People's Participation in The Democratic Process
WEEK 23	L23 : Challenges to Indian Democracy
WEEK 24	L24 : National Integration and Secularism
WEEK 25	L25 : Socio-Economic Development and Empowerment of Disadvantaged Groups
WEEK 26	L26 : Environmental Degradation and Disaster Management L27 : Peace and Security

ECONOMICS

(COURSE CODE : 214)



Mrs. Siba Saraswathy
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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.

ABOUT INSTRUCTOR

Mrs. 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 as Senior Executive Officer in Accountancy. Her current area of interest lies in Commerce and Management.

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	L1 : What is Economics?
WEEK 02	L2 : Human Wants
WEEK 03	L3 : Goods and Services
WEEK 04	L4 : Economy - Its Meaning and Types
WEEK 05	L5 : Central Problems of an Economy
WEEK 06	L6 : Basic Economic Activities
WEEK 07	L7 : Production
WEEK 08	L8 : Cost and Revenue
WEEK 09	L9 : Demand
WEEK 10	L10 : Supply
WEEK 11	L11 : Determination of Price and Quantity
WEEK 12	L12 : Market
WEEK 13	L13 : Role of Govt. in Determination of Price & Quantity System
WEEK 14	L14 : Money and its Role
WEEK 15	L15 : Banking and Credit
WEEK 16	L16 : Savings and Insurance
WEEK 17	L17 : Collection and Presentation of Data
WEEK 18	L18 : Analysis of Data
WEEK 19	L19 : An Overview of Indian Economy
WEEK 20	L20 : Sectoral Aspects of Indian Economy
WEEK 21	L21 : Challenges of Indian Economy
WEEK 22	L22 : Indian Economy in Global Context
WEEK 23	L23 : Environment and Sustainable Development
WEEK 24	L24 : Consumer Awareness
WEEK 25	Revision
WEEK 26	Revision

BUSINESS STUDIES

(COURSE CODE : 215)



Mrs. Siba Saraswathy
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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 organizations 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.

ABOUT INSTRUCTOR

Mrs. 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 as Senior Executive Officer in Accountancy. Her current area of interest lies in Commerce and Management.

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, BPO, KPO 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	L1 : Nature and Scope of Business
WEEK 02	L2 : Industry and Commerce
WEEK 03	L3 : Sole Proprietorship, Partnership and Hindu Undivided Family
WEEK 04	L4 : Cooperative Societies and Joint Stock Companies
WEEK 05	L5 : Transport Services
WEEK 06	L6 : Warehousing Services
WEEK 07	L7 : Communication Services
WEEK 08	L8 : Postal and Courier Services
WEEK 09	L9 : Banking Services
WEEK 10	L10 : Insurance Services
WEEK 11	L11 : Outsourcing
WEEK 12	L12 : Purchase and Sale
WEEK 13	L13 : Channels of Distribution
WEEK 14	L14 : Retail Trade
WEEK 15	L15 : Advertising
WEEK 16	L16 : Sales Promotion and Personal Selling
WEEK 17	L17 : Consumer - Rights and Responsibilities
WEEK 18	L18 : Consumer Protection
WEEK 19	L19 : Choosing a Career
WEEK 20	L20 : Entrepreneurship
WEEK 21	L21 : Project Work
WEEK 22	Revision
WEEK 23	Revision
WEEK 24	Revision
WEEK 25	Revision
WEEK 26	Revision

HOME SCIENCE

(COURSE CODE : 216)



Dr. Anjana Agarwal
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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 integrate the life skills which equip the learner to face the challenges of life in changing scenario of eating habit, health, fashion, child care, family dynamics, market, media, mobile apps, entrepreneurship, laws & 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 & 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 & resource management. Home Science equips the learner in all aspects of life.

ABOUT INSTRUCTOR

Dr. Anjana Agarwal is employed at National Institute of Open Schooling (NIOS) as Senior Executive officer (SEO) in the Academic Department, Noida. She looks after academic activities including the 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 also writes scientific articles and papers in national & international journals for long and the first author of "Text Book of Human Nutrition" 2014. She also owns a website www.nutroma.in and provides dietary and nutritional counselling for health and disease. She had been academically involved for Food Science & Nutrition in various capacities in Dehradun and Mumbai for more than 16 years. She has also delivered presentations on nutrition & aromatherapy in public and corporate forums. She achieved her higher education in Pantnagar & University of Delhi, New Delhi with fellowships.

LEARNING OUTCOME

The learner will be able to:

- 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 milestones of growth & development and develop sensitivity for each member of 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	L1 : What is Home Science?
WEEK 02	L2 : Food and Nutrients
WEEK 03	L3 : Food Groups
WEEK 04	L4 : Methods of cooking food
WEEK 05	L5 : Food Preservation, Food Spoilage
WEEK 06	L6 : Environment
WEEK 07	L7 : Health
WEEK 08	L8 : Communicable and Life Style diseases
WEEK 09	L9 : Care and Maintenance of Fabric
WEEK 10	L10 : Fibre to Fabric
WEEK 11	L11 : Fabric Finishes
WEEK 12	L12 : Housing
WEEK 13	L13 : Safety at Home
WEEK 14	L14 : Introduction to Resources
WEEK 15	L15 : Time and Energy Management
WEEK 16	L16 : Managing Family Income
WEEK 17	L17 : Life Begins
WEEK 18	L18 : Concept of development
WEEK 19	L19 : My Family and I
WEEK 20	L20 : Adolescence Charms and Challenges
WEEK 21	L21 : Ethics in Daily Life
WEEK 22	L22 : Consumer Education, Consumer Rights
WEEK 23	Revision For Theory
WEEK 24	Revision For Theory
WEEK 25	Revision For Practical
WEEK 26	Revision For Practical

PSYCHOLOGY

(COURSE CODE : 222)



Dr. Shweta Verma
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

The study of psychology deals with the important aspects of human behaviour & 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 range of behaviours and mental processes. The course highlights on basic psychological processes, human development & social psychological process. You will also be able to learn about the 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.

ABOUT INSTRUCTOR

Dr. Shweta Verma is employed at National Institute of Open Schooling (NIOS) as Senior Executive officer (SEO) in the Academic Department, Noida. She has done Ph.D. in Psychology from H.P.U. Shimla University, She has worked with various government organizations as Psychologist and Counsellor and having a university teaching experience of more than 2 years.

LEARNING OUTCOME

The learner will be able to:

- 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	L1 : Introduction to Psychology L2 : Methods of Psychology
WEEK 02	L3 : Individual Differences
WEEK 03	L4 : Learning L5 : Sensory Processes
WEEK 04	L6 : Memory
WEEK 05	L7 : Thinking and Problem Solving
WEEK 06	L8 : Motivation and Emotion
WEEK 07	L9 : Nature and Determinants
WEEK 08	L10 : Childhood
WEEK 09	L11 : Adolescence and its challenges
WEEK 10	L12 : Adulthood and Aging
WEEK 11	L13 : Group and leadership
WEEK 12	L14 : Communication
WEEK 13	L15 : Attitude
WEEK 14	L16 : Social and Educational Problem
WEEK 15	L17 : Happiness and Well Being
WEEK 16	L18 : Mental Disorders and Their Treatment
WEEK 17	L19 : Mental Health and Hygiene
WEEK 18	L20 : Aptitude, Interest and Job Requirements
WEEK 19	L21 : Preparation for the Vocational Role
WEEK 20	L22 : The World of Organizations
WEEK 21	L23 : Environmental Stress
WEEK 22	L24 : Healthy Mind in Healthy Body
WEEK 23	L25 : Self-development and Yoga
WEEK 24	L26 : Nurturing the whole being-An Indian Perceptive Part
WEEK 25	L27 : Controlling and Disciplining the Mind
WEEK 26	Revision

INDIAN CULTURE AND HERITAGE

(COURSE CODE : 223)



Dr. Azmat Noori
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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 & rich cultural heritage but also to study it objectively and assess it critically.

ABOUT INSTRUCTOR

Dr. Azmat Noori is employed at National Institute of Open Schooling (NIOS) as Academic officer in the Academic Department, Noida. She has completed 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 and P.G Diploma in Women Studies, 2008, Aligarh Muslim University, Aligarh.

LEARNING OUTCOME

The learner will be able to:

- explain various aspects of the culture and heritage of India;
- Identify contributions of our ancestors in the areas of religion, philosophy, science, arts, education, languages and literature.
- demonstrate underlying unity amidst diversity in all aspects of India's culture;
- trace the impact of Indian culture in different countries of the world;
- relate to the composite nature of Indian culture and
- develop a feeling of love and a sense of belonging towards the nation.

COURSE PLAN

WEEK 01	L1 : Culture: An Introduction
WEEK 02	L2 : Indian Culture
WEEK 03	L3 : Ancient India
WEEK 04	L4 : Medieval India
WEEK 05	L5 : Modern India
WEEK 06	L6 : Indian Languages and Literature-I
WEEK 07	L7 : Indian Languages and Literature-II
WEEK 08	L8 : Religion and Philosophy in Ancient India
WEEK 09	L9 : Religion and Philosophy in Medieval India
WEEK 10	L10 : Religious Reform Movements in Modern India
WEEK 11	L11 : Indian Painting
WEEK 12	L12 : Performing Arts: Music, Dance and Drama
WEEK 13	L13 : Indian Architecture
WEEK 14	L14 : Science and Technology in India
WEEK 15	L15 : Scientists of Ancient India
WEEK 16	L16 : Science and Scientists of Medieval India
WEEK 17	L17 : Scientists of Modern India
WEEK 18	L18 : Education in India
WEEK 19	L19 : Indian Social Structure
WEEK 20	L20 : Socio-Cultural Issues in Contemporary India
WEEK 21	L21 : Spread of Indian Culture Abroad
WEEK 22	Revision
WEEK 23	Revision
WEEK 24	Revision
WEEK 25	Revision
WEEK 26	Revision

ACCOUNTANCY

(COURSE CODE : 224)



Mrs. Siba Saraswathy
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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.

ABOUT INSTRUCTOR

Mrs. 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 as Senior Executive Officer in Accountancy. Her current area of interest lies in Commerce and Management.

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	L1 : Introduction of Accounting
WEEK 02	L2 : Accounting Concepts and Conventions
WEEK 03	L3 : Accounting Terms
WEEK 04	L4 : Accounting Equation
WEEK 05	L5 : Double Entry System
WEEK 06	L6 : Journal
WEEK 07	L7 : Cash Book
WEEK 08	L8 : Bank Reconciliation Statement
WEEK 09	L9 : Purchase and Sales Book
WEEK 10	L10 : Ledger
WEEK 11	L11 : Trial Balance and Accounting Errors
WEEK 12	L12 : Depreciation
WEEK 13	L13 : Provisions and Reserve
WEEK 14	L14 : Financial Statements (without adjustments)
WEEK 15	L15 : Financial Statements (with adjustments)
WEEK 16	L16 : Computers in Accounting
WEEK 17	L17 : 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

PAINTING

(COURSE CODE : 225)



Ms. Sanchita Bhattacharjee
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

Painting is nothing but skills to express oneself through the 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.

ABOUT INSTRUCTOR

Ms. Sanchita Bhattacharjee is presently working as a Senior Executive Officer (Performing Arts Education) in National Institute of Open Schooling from July 2001. She holds 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.

LEARNING OUTCOME

The learner will be able to:

- 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 01	L1 : Tools and Materials
WEEK 02	L2 : Object Study
WEEK 03	L3 : Nature Study
WEEK 04	L4 : Human Figure
WEEK 05	L5 : Study of Animals and Birds
WEEK 06	L6 : Composition

THEORY

WEEK 07	L1 : History and Appreciation of Art (From 3000 BC to 600 AD) 01
WEEK 08	L2 : History and Appreciation of Art 05 (From 7 th Century AD to 12 th Century AD)
WEEK 09	L3 : History and Appreciation of Art (From 13 th Century AD to 18 th Century AD)
WEEK 10	L4 : Folk Art of India 13
WEEK 11	L5 : Renaissance 17
WEEK 12	L6 : Impressionism 21
WEEK 13	L7 : Cubism, Surrealism and Abstract Art 24
WEEK 14	L8 : Pioneers of Contemporary Indian Art 27
WEEK 15	L9 : 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

DATA ENTRY OPERATION

(COURSE CODE : 229)



Mrs. B. Radhika
(Course Coordinator)

TYPE OF COURSE : Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Self Certificate and Minimum Age 14 years

COURSE OUTLINE

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 analyses their data and presentation software helps them to present their views or ideas to audience.

ABOUT INSTRUCTOR

Mrs. B. Radhika works as Academic Officer (ICT) at National Institute of Open Schooling. She completed her post-graduation in Computer Applications (MCA) at Avinashilingam University for Women. She had earlier graduated in Bachelor of Science - Mathematics from Bharatiar University. In addition, she also completed her Bachelor of Education from Tamil Nadu Teachers Education University. She has had 5+ years of intense and dynamic work experience in various projects with multinational clients at NIIT Technologies Ltd., NOIDA and Wipro Technologies Ltd., Greater NOIDA. For the last six years, she has been associated with NIOS for developing and revising the content of ICT courses (Academic and Vocational) of NIOS.

LEARNING OUTCOME

The learner will be able to:

- 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 Power Point presentations.

COURSE PLAN

WEEK 01	L1 : Basics of Computer
WEEK 02	Video for L1
WEEK 03	L2 : Operating System
WEEK 04	Video for L2
WEEK 05	L3 : Basics of Word Processing
WEEK 06	Video for L3
WEEK 07	L4 : Formatting Documents
WEEK 08	Video for L4
WEEK 09	L5 : Mail Merge
WEEK 10	Video for L5
WEEK 11	L6 : Basics of Spreadsheet
WEEK 12	Video for L6
WEEK 13	L7 : Formatting Worksheet
WEEK 14	Video for L7
WEEK 15	L8 : Formulas, Functions and Charts
WEEK 16	Video for L8
WEEK 17	L9 : Creating Presentation
WEEK 18	Video for L9
WEEK 19	L1 Quiz
WEEK 20	L2 Quiz
WEEK 21	L3 Quiz
WEEK 22	L4 Quiz
WEEK 23	L5 Quiz
WEEK 24	L6 Quiz
WEEK 25	L7 Quiz
WEEK 26	L8 & L9 Quiz



SENIOR SECONDARY COURSE



SR. SECONDARY SUBJECTS

- 1 HINDI
- 2 ENGLISH
- 3 SANSKRIT
- 4 MATHEMATICS
- 5 PHYSICS
- 6 CHEMISTRY
- 7 BIOLOGY
- 8 GEOGRAPHY
- 9 ECONOMICS
- 10 HOME SCIENCE
- 11 PSYCHOLOGY
- 12 COMPUTER SCIENCE
- 13 SOCIOLOGY
- 14 PAINTING
- 15 ENVIRONMENTAL SCIENCE
- 16 LIBRARY & INFORMATION SCIENCE

HINDI

(COURSE CODE : 301)



Dr. B.K. Rai
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

हिंदी अपने साहित्यिक एवं बोलचाल के रूप के माध्यम से आरम्भ से ही जन आकांक्षाओं की अभी व्यक्ति करती रही है। हिंदी साहित्य की समृद्धि का यह बहुत 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 साहित्य 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।

ABOUT INSTRUCTOR

Dr. B.K. Rai is Assistant Director (Academics) at NIOS Headquarter since 28th October 2016. He attained M.A. in Mass Communication & Hindi. He also attained M.Phil. (Topic : Gantantra Divas ki Shobha Yatra [Ravindernath Tyagi]: Samvdana 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 and Adhunik Hindi Sahitya (Prose and Poetry).

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 01	L1 : कविता कैसे पढ़ें L2 : रैदास
WEEK 02	L3 : तुलसीदास L4 : मीराबाई
WEEK 03	L5 : रहीम L6 : गद्य कैसे पढ़ें
WEEK 04	L7 : एक था पेड़ और एक था ठूँठ L8 : दो कलाकार
WEEK 05	L9 : अच्छा कैसे लिखें L10 : सार कैसे करें
WEEK 06	L11 : बिहारी L12 : पद्माकर
WEEK 07	L13 : सूर्यकांत त्रिपाठी 'निराला' L14 : महादेवी
WEEK 08	L15 : अनुराधा L16 : अनपढ़ बनाए रखने की साजिश
WEEK 09	L17 : पीढियाँ और गिट्टियाँ L18 : कुटज
WEEK 10	L19 : पत्र कैसे लिखें L20 : भाव पल्ल बन
WEEK 11	L21 : प्रतिवेदन, टिप्पण और प्रारूपण L22 : रामधारी सिंह 'दिनकर'
WEEK 12	L23 : गजानन माधव 'मुक्तिबोध' L24 : राजेंद्र उपाध्याय
WEEK 13	L25 : हिंदी कविता की विकास यात्रा L26 : क्रोध
WEEK 14	L27 : आखिरी चट्टान L28 : जिजीविषा की विजय
WEEK 15	L29 : निबंध कैसे लिखें L30 : तालिका, आरेख निर्माण आदि
WEEK 16	L31 : परियोजना कैसे लिखें
WEEK 17, 18 & 19	L32 : उपन्यास
WEEK 20 & 21	L33 : तीन लघुकथाएं
WEEK 22	L34A : सूचना प्रौद्योगिकी : स्वरूप और महत्व L35A : संचार माध्यम और उनके प्रकार
WEEK 23	L36A : संचार की प्रक्रिया L37A : संचार माध्यम के प्रमुख अवयव
WEEK 24	L38A : संचार माध्यम की भाषा L34B : वैज्ञानिक दृष्टि और वैज्ञानिक विकास
WEEK 25	L35B : भारतीय विज्ञान L36B : जनसंख्या वृद्धि और विज्ञान
WEEK 26	L37B : कंप्यूटर और हिंदी L38B : विज्ञान की भाषा

ENGLISH

(COURSE CODE : 302)



Dr. Saumya Rajan
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

In today's global world, the importance of English cannot be denied and ignored since English is the most common language spoken everywhere & also it is the official language in a large number of countries. With the help of developing technology, English has been playing a major role in many sectors including medicine, engineering and education. It is the dominant business language and it has become almost a necessity for people to speak English if one has to enter a global workforce.

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. The Special efforts will be made to enrich the vocabulary of students.

ABOUT INSTRUCTOR

Saumya Rajan is currently working as Regional Director, National Institute of Open Schooling Regional Office, Pune, Ministry of Human Resource Development, Government of India. She is a D.Phil. in English Literature from the University of Allahabad and trained in Incorporating Gender Concerns in Public Policy from the Indian Institute of Public Administration, New Delhi, India. She is certified in Global Diplomacy- Diplomacy in the Modern World from the University of London and SOAS, University of London.

She has availed National and Central Research Scholarships for her academic excellence. A Gold Medalist right from her school to university, she has been widely published in international journals and magazines of repute. Her books - *Common Shadows*, *Guerilla Ignition*, USA and *New World Order of Postmodernism in the Plays of Harold Pinter : Pause at Play*, Penguin-Partridge, UK- are out for English literature enthusiasts.

She can be reached at www.saumyarajan.com, www.saumyarajanspaces.blogspot.com and rajansaumyanios@gmail.com.

LEARNING OUTCOME

At the end of course learner should be able to use the following language functions and related language items appropriately for real time speech activities.

- Greetings /taking leave
- Introductions
- Seeking /supplying information
- Describing
- Narrating stories
- Reporting Events
- Making requests and Suggestions
- Giving Opinion
- Expressing Likes and dislikes
- Apologizing /expressing regret/thanking
- Giving directions /instructions
- Taking and giving messages

COURSE PLAN

WEEK 01	L1 : My First Steps
WEEK 02	L2 : Leisure
WEEK 03	L3 : Reading with Understanding
WEEK 04	L4 : Father Dear Father
WEEK 05	L5 : Fuel of the Future
WEEK 06	L6 : My Grandmother's House
WEEK 07	L7 : Reading with Understanding
WEEK 08	L8 : A Case of Suspicion
WEEK 09	L9 : My Son will not a Beggar be
WEEK 10	L10 : Where the Mind is Without Fear
WEEK 11	L11 : Reading with Understanding
WEEK 12	L12 : If I Were You
WEEK 13	L13 : The Tiger in the Tunnel
WEEK 14	L14 : The Road not Taken
WEEK 15	L15 : Reading with Understanding
WEEK 16	L16 : I Must Know the Truth
WEEK 17	L17 : India-Her Past and Future L18 : Night of the Scorpion
WEEK 18	L19 : Reading with Understanding L20 : Reading with Understanding
WEEK 19	L21 : Reading with Understanding L22 : Reading with Understanding
WEEK 20	L23 : Reading with Understanding L24 : Reading with Understanding
WEEK 21	L25 : Bholi
WEEK 22	L26A : The Reception Desk and You L26B : Face to Face Communication in Business
WEEK 23	L27A : Managing the Telephone L27B : Writing Memos and Letters
WEEK 24	L28A : Analysing Turns in Telephoning L28B : Writing E-mails
WEEK 25	L29A : Controlling Strategies and Out-Going Calls L29B : Writing Reports
WEEK 26	L30A : Aids for a Receptionist L30B : Writing Job Applications L31 : Appearing for an Interview

SANSKRIT

(COURSE CODE : 309)



Dr. R.N. Meena
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

औचित्यम्

संस्कृतं नाम विश्वस्य प्राचीनतमा भाषा। एषा भाषा अधिकांशभारतीयभाषाणाम् यूरोपीयभाषाणां च जननीरूपेण अथवा सम्पोषिकारूपेण विराजते। एषा ननु मूलधेतः एव भारतीयसंस्कृतेः, धर्मस्य, दर्शनस्य, अध्यात्मज्ञानस्य, इतिहासस्य, पुराणानाम्, भूगोलस्य, राजनीतेः अपि च विज्ञानस्य। संस्कृतभाषा नवीनशब्दानां निर्माणार्थम् अपूर्वा क्षमतां धारयति यस्याः उपयोगः अन्याभिः भारतीयभाषाभिः अपि क्रियते। राष्ट्रीयभावनात्मकैक्याय अन्ताराष्ट्रियभ्रातृत्वभावनायाः सुदृढीकरणाय अस्याः महत्त्वपूर्णं योगदानमस्ति। संस्कृतवाङ्मये मानवीयमूल्यानां संरक्षणार्थं संवर्धनार्थं सम्यग्विकासार्थञ्च अत्र अमूल्यसामग्री विद्यते। 'वसुधैव कुटुम्बकम्' 'यत्र विश्वं भवत्येकनीडम्' इत्यादीनि आदर्शवाक्यानि आदिकालतः अद्यपर्यन्तम् विश्वस्य सम्मुखे विश्वव्यापिनः ऐक्यस्य कीर्तिमानं स्थापयन्ति। इयं भाषा एव वैश्वीकरणस्य संकल्पनां सर्वप्रथमं प्रस्तौति। संस्कृत भाषाभागीरथी प्राचीनकालतः अद्यावधि सततरूपेण प्रवहमाना वर्तते। वर्तमाने कालेऽपि बहुभिः जनैः दैनिकजीवने अस्याः भाषायाः प्रयोगः क्रियते। छात्राः संस्कृतभाषायां निहितज्ञानेन विज्ञानेन च परिचिताः भूत्वा आत्मगौरवस्य अनुभवं कुर्युः इति कारणतः उच्चतरविद्यालयीयपाठ्यक्रमे संस्कृतभाषायाः अध्ययनार्थम् अवसरः कल्प्यते।

उच्चतरमाध्यमिकस्तरे संस्कृतभाषां पठित्वा छात्राः विश्वविद्यालयस्तरे प्रवर्तमानेषु पाठ्यक्रमेषु अध्ययनार्थम् अवसरं प्राप्तुं समर्थाः भविष्यन्ति, भारतीयस्य आध्यात्मिकसाहित्यस्य पारायणे, वैज्ञानिकचिन्तने शक्ताः भविष्यन्ति। संस्कृतवाङ्मये निहितविशिष्टज्ञानसम्पदा परिचिताः भूत्वा गौरवम् अनुभविष्यन्ति। एषः पाठ्यक्रमः नैतिकादर्शानां स्थापनायाम् अपि च सम्पूर्णव्यक्तित्वविकासार्थं च साहाय्यकः भविष्यति इति आशास्यते।

ABOUT INSTRUCTOR

Dr. R.N. Meena is Assistant Director (Academics) at NIOS Headquarter, Noida. He completed his M.A., M.Phil., Ph.D. from JNU, New Delhi. He is expertise in Language Learning, Open and Distance Learning, Philosophy and Thoughts, Theatre, Screenplay writing for short film and educational videos, Linguistics, Gender, Caste and Tribal issues.

LEARNING OUTCOME

- संस्कृतभाषायाः सामान्यज्ञानवर्धनं भविष्यति ।
- संस्कृतसाहित्यं प्रति छात्रेषु अभिरुचेः वर्धनम्।
- संस्कृतसाहित्यस्य प्रमुखविधानां प्रतिनिधिचिन्तानां ज्ञानम्।
- छात्रेषु राष्ट्रियसांस्कृतिकसामाजिकनैतिक-मूल्यानां विकासः।
- विज्ञानप्रौद्योगिकीक्षेत्रे प्राचीनभारतीयमनीषिणां योगदानैः परिचयः।

COURSE PLAN

WEEK 01	L1 : जीवन संदेशः
WEEK 02	L2 : यदि जानासि तद् वद
WEEK 03	L3 : आरोग्यं परमं सुखम्
WEEK 04	L4 : वाचां मण्डनं सत्यम्
WEEK 05	L5 : अतिलोभः न कर्त्तव्यः
WEEK 06	L6 : राजते खलु कन्याकुमारी
WEEK 07	L7 : एतद् उपास्यम्
WEEK 08	L8 : परार्थे आत्मोत्सर्गः
WEEK 09	L9 : काले फलति सौभाग्यम्
WEEK 10	L10 : पतन्ति परपीडकाः
WEEK 11	L11 : अनुच्छेदलेखनम्
WEEK 12	L12 : संवादलेखनम्
WEEK 13	L13 : वर्षर्तुवर्णनम्
WEEK 14	L14 : अमृतस्य पन्थाः
WEEK 15	L15 : हिमालयो नाम नगाधिराजः
WEEK 16	L16 : मानो हि महतां धनम्
WEEK 17	L17 : कल्पनाकीर्तिः विजयते, L18 : पर्यावरणस्य संरक्षणम्
WEEK 18	L19 : क्रोधोऽनर्थकारकः L20 : अनन्तःज्ञानसागरः
WEEK 19	L21 : शल्यचिकित्साजनकः सुश्रुतः L22 : कष्टं न्यासस्य रक्षणम्
WEEK 20	L23 : हृदय परिवर्तनम् L24 : पत्रं लिखामः
WEEK 21	L25 : परियोजना-निर्माणम्
WEEK 22	L26A : समसामयिकं संस्कृतसाहित्यम् L26B : संस्कृतस्य प्रयोजनमूलकता
WEEK 23	L27A : भारतीयज्ञानविज्ञानपरम्परा L27B : जनसंचारमाध्यमः
WEEK 24	L28A : संस्कृतम् अन्याः भारतीयाः भाषाः च L28B : संस्कृतपत्रकारिता
WEEK 25	L29A : भारतीयसंस्कृतौ संस्काराः L29B : पत्रिकाप्रारूपम्
WEEK 26	L30 : मुद्रणत्रुटिशोधनम्

MATHEMATICS

(COURSE CODE : 311)



Dr. Rajendra Kumar Nayak
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

Mathematics is an important discipline of learning at the Senior Secondary stage. It helps learner in acquiring decision making ability through its applications to real life both in familiar and unfamiliar situations. It predominantly contributes to the development of precision, rational reasoning and analytical thinking. In the Senior Secondary stage is most crucial where learners for the first time move towards diversification. At this stage, the learners start thinking to take the important decisions concerning their future career by choosing suitable courses. It is the stage, from where learners would either go for higher academic education in Mathematics or for the Professional courses or it may be the end of their academic career. One of the basic aims of learning Mathematics at Senior Secondary level is to be developed problem solving skills and quantificational experiences around the learners.

The present curriculum in Mathematics has been distributed into two parts and ten modules. Part-1 consists of five modules namely as: Sets; Relation and Function; Sequences & Series; Algebra-I; Co-ordinate Geometry; Statistics and Probability. Similarly, there are five modules inside the Part-2 namely as: Algebra-II; Relations and Functions; Calculus; Vectors and Three-Dimensional Geometry; Linear Programming and Mathematical Reasoning.

ABOUT INSTRUCTOR

Dr. Rajendra Kumar Nayak is Academic Officer (Mathematics) at NIOS for 6 years. He has 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, PGDE (IGNOU). Previously, He worked as Lecturer in the Education at Ravenshaw University, Cuttack from 2nd May, 2011 to 10th July, 2012; He has also 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 the Education at Army Institute of Education, Delhi Cantt, New Delhi from 1st October, 2009 to 31st May, 2010 and worked as Research fellow in the 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 & Evaluation, Teacher Education and Distance Education.

LEARNING OUTCOME

After completing this course, 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 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 01	L1 : Sets
WEEK 02	L2 : Relations and Functions-I
WEEK 03	L3 : Trigonometric Functions-I L4 : Trigonometric Functions-II
WEEK 04	L5 : Relation between Sides and Angles of a triangle
WEEK 05	L6 : Sequences and Series L7 : Some Special Sequences
WEEK 06	L8 : Complex Numbers
WEEK 07	L9 : Quadratic Equations and Linear Inequalities L10 : Principle of Mathematical Induction
WEEK 08	L11 : Permutations and Combinations L12 : Binomial Theorem
WEEK 09	L13 : Cartesian System of Rectangular Co-ordinates L14 : Straight Lines
WEEK 10	L15 : Circles L16 : Conic Sections
WEEK 11	L17 : Measures of Dispersion L18 : Random Experiments and Events
WEEK 12	L19 : Probability
WEEK 13	L20 : Matrices
WEEK 14	L21 : Determinants L22 : Inverse of a Matrix and its Applications
WEEK 15	L23 : Relation and Functions-II L24 : Inverse Trigonometric Functions
WEEK 16	L25 : Limits and Continuity
WEEK 17	L26 : Differentiation
WEEK 18	L27 : Differentiation of Trigonometric functions L28 : Differentiation of Exponential and Logarithmic Functions
WEEK 19	L29 : Application of Derivatives
WEEK 20	L30 : Integration
WEEK 21	L31 : Definite Integrals
WEEK 22	L32 : Differential Equations
WEEK 23	L33 : Introduction to 3-D
WEEK 24	L34 : Vectors L35 : Plane
WEEK 25	L36 : Straight Line
WEEK 26	L37 : Linear Programming L38 : Mathematical Reasoning

PHYSICS

(COURSE CODE : 312)



Ms. Bijayalaxmi Pradhan
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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 how's 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.

ABOUT INSTRUCTOR

Ms. Bijayalaxmi Pradhan is Senior Executive Officer (Physics) in National Institute of Open Schooling. 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 programs, live audio programs for web radio 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 Prasar.

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 & communicative skills such as reporting of observations and experimental results.
- develop problem solving ability e.g. analysing 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 01	L1 : Units, Dimensions and Vectors
WEEK 02	L2 : Motion in a Straight Line
WEEK 03	L3 : Laws of Motion
WEEK 04	L4 : Motion in a Plane L5 : Gravitation
WEEK 05	L5 : Gravitation L6 : Work, Energy and Power
WEEK 06	L6 : Work, Energy and Power L7 : Motion of Rigid Body
WEEK 07	L8 : Elastic Properties of Solids L9 : Properties of Fluids
WEEK 08	L9 : Properties of Fluids
WEEK 09	L10 : Kinetic Theory of Gases
WEEK 10	L11 : Thermodynamics
WEEK 11	L12 : Heat Transfer and Solar Energy L13 : Simple Harmonic Motion
WEEK 12	L14 : Wave Phenomena
WEEK 13	L15 : Electric Charge and Electric Field
WEEK 14	L16 : Electric Potential and Capacitors
WEEK 15	L17 : Electric Current
WEEK 16	L18 : Magnetism and Magnetic Effect of Electric Current
WEEK 17	L19 : Electromagnetic Induction and Alternating Current
WEEK 18	L20 : Reflection and Refraction of Light L21 : Dispersion and Scattering of Light
WEEK 19	L21 : Dispersion and Scattering of Light L22 : Wave Phenomena and Light
WEEK 20	L22 : Wave Phenomena and Light L23 : Optical Instruments
WEEK 21	L24 : Structure of Atom L25 : Dual Nature of Radiation and Matter
WEEK 22	L25 : Dual Nature of Radiation and Matter L26 : Nuclei and Radioactivity
WEEK 23	L27 : Nuclear Fission and Fusion
WEEK 24	L28 : Semiconductors and Semiconducting Devices
WEEK 25	L29 : Applications of Semiconductor Devices
WEEK 26	L30 : Communication Systems

CHEMISTRY

(COURSE CODE : 313)



Dr. Rajeev Prasad
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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.

ABOUT INSTRUCTOR

Dr. Rajeev Prasad, M.Sc. (Chemistry), B.Ed. Ph.D. (Organic Chemistry), PGDDE from IGNOU, presently working as Assistant Director (Academic) at National Institute of Open Schooling, MHRD, Govt. of India, Noida. He worked as Academic Officer (Chemistry), NIOS from 2011 to 2016 and developed and revised Senior Secondary Chemistry (313) course of NIOS and developed various audio video and multimedia programmes. He has 11 years of experience of teaching Chemistry subject in reputed academic Institutions as Lecturer/PGT.

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.
- realize 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.

COURSE PLAN

WEEK 01	L1 : Atoms, Molecules and Chemical Arithmetic
WEEK 02	L2 : Atomic Structure L3 : Periodic Table and Periodicity in Properties
WEEK 03	L4 : Chemical Bonding
WEEK 04	L5 : The Gaseous and Liquid State L6 : The Solid State
WEEK 05	L7 : Solutions L8 : Colloids
WEEK 06	L9 : Chemical Thermodynamics L10 : Spontaneity of Chemical Reactions
WEEK 07	L11 : Chemical Equilibrium L12 : Ionic Equilibrium
WEEK 08	L13 : Electrochemistry
WEEK 09	L14 : Chemical Kinetics L15 : Adsorption and Catalysis
WEEK 10	L16 : Occurrence and Extraction of Metals L17 : Hydrogen and s-Block Elements
WEEK 11	L18 : General Characteristics of the p-block Elements
WEEK 12	L19 : p-block Elements and their Compounds - I
WEEK 13	L20 : p-block Elements and their Compounds - II
WEEK 14	L21 : d-Block and f-Block Elements L22 : Coordination Compounds
WEEK 15	L23 : Nomenclature and General Principles
WEEK 16	L24 : Hydrocarbons
WEEK 17	L25 : Compounds of Carbon Containing Halogens (Haloalkanes and Haloarenes)
WEEK 18	L26 : Alcohols, Phenols and Ethers
WEEK 19	L26 : Alcohols, Phenols and Ethers (Contd...)
WEEK 20	L27 : Aldehydes, Ketones and Carboxylic Acids
WEEK 21	L27 : Aldehydes, Ketones and Carboxylic Acids (Contd...)
WEEK 22	L28 : Compounds of Carbon Containing Nitrogen
WEEK 23	L29 : Biomolecules
WEEK 24	L30 : Drugs and Medicines
WEEK 25	L31 : Soaps, Detergents and Polymers
WEEK 26	L32 : Environmental Chemistry

BIOLOGY

(COURSE CODE : 314)



Dr. Sanghmitra Suryapani
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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.

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 done 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 & Technology and developed various audio programmes through Muktaavidyavani and video programs for MOOCs at NIOS. She has also represented at various national, international and corporate platforms for writing and presenting talks.

LEARNING OUTCOME

The Learner will be able to understand :

- acquire knowledge of biological terms, facts, concepts, principles and processes in order to understand the living world as a whole.
- appreciate diversity in the living world as also the interrelationships of various living organisms, ecological balance in nature, and the role of biology in human welfare.
- visualize the hazards of environmental pollution, and to create awareness for sustainable use of natural resources in the service of humankind.
- develop insight into the role and impact of Biology in various allied areas such as medicine, agriculture, forestry, biotechnology, veterinary sciences and pharmacology etc.
- develop interest in the living world with an aim to respect life.

COURSE PLAN

WEEK 01	L1 : Origin and Evolution of Life and Introduction to Classification L2 : The Kingdoms Monera, Protoctista and Fungi L3 : Kingdoms Plantae and Animalia
WEEK 02	L4 : Cell - Structure and Function L5 : Tissues and other Level of Organization
WEEK 03	L6 : Root System L7 : Shoot System
WEEK 04	L8 : Absorption, Transport and Water Loss (Transpiration) in Plants L9 : Nutrition in plants - Mineral Nutrition L10 : Nitrogen Metabolism
WEEK 05	L11 : Photosynthesis L12 : Respiration in Plants
WEEK 06	L13 : Nutrition and Digestion L14 : Respiration and Elimination of Nitrogenous Wastes
WEEK 07	L15 : Circulation of Body Fluids L16 : Locomotion and Movement
WEEK 08	L17 : Coordination and Control - The Nervous and Endocrine Systems L18 : Homeostasis: The Steady State
WEEK 09	L19 : Reproduction in Plants L20 : Growth and Development in Plants
WEEK 10	L21 : Reproduction and Population Control
WEEK 11	L22 : Principles of Genetics
WEEK 12	L23 : Molecular Inheritance and Gene Expression
WEEK 13	L23 : Molecular Inheritance and Gene Expression (Contd...)
WEEK 14	L24 : Genetics and Society
WEEK 15	L25 : Principles of Ecology
WEEK 16	L25 : Principles of Ecology (Contd...)
WEEK 17	L26 : Conservation and Use of Natural Resources
WEEK 18	L26 : Conservation and Use of Natural Resources (Contd...)
WEEK 19	L27 : Pollution
WEEK 20	L28 : Nutrition and Health
WEEK 21	L29 : Some Common Human Diseases
WEEK 22	L29 : Some Common Human Diseases (Contd...)
WEEK 23	L30 : Biotechnology
WEEK 24	L30 : Biotechnology (Contd...)
WEEK 25	L31 : Immunobiology : An Introduction
WEEK 26	L31 : Immunobiology : An Introduction (Contd...)

GEOGRAPHY

(COURSE CODE : 316)



Mr. Vivek Singh
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

Geography as a discipline is very interesting. It is the study about How, Why, When and Where human and natural activity occur and how these activities are interconnected.

So far the objectives are concerned, the entire course has been developed for you:

- ⇒ To be familiar with the terms, key concepts and basic principles of geography, it also helps you
- ⇒ To explore the processes and patterns of natural and human phenomena as well as the relationship between physical and human environment,
- ⇒ It provides opportunity To apply geographical knowledge and methods to resolve the emerging issues i.e. pollution, depletion of resources and many more,
- ⇒ It will also enable you To study the demographic structure of India and appreciate the concept of unity in diversity.

ABOUT INSTRUCTOR

Mr. Vivek Singh is working as Sr. Executive Officer (Academic) at Academic Department in NIOS, Noida. He has done M.A. (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.

LEARNING OUTCOME

After completing this course, The learner will be able to:

- 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 issue 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 01	L1 : Nature of Geography as a Discipline
WEEK 02	L2 : Earth's Interior and Its Material
WEEK 03	L3 : Dynamic Surface of the Earth
WEEK 04	L4 : Evolution of Landforms Due to Internal Forces L5 : The Work of Running Water and Underground Water
WEEK 05	L6 : The Work of Moving Ice, Wind and Sea Wave L7 : Major Landforms and Their Economic Significance
WEEK 06	L8 : Oceans: Submarine Relief and Water Circulation
WEEK 07	L9 : Atmosphere Composition and Structure L10 : Insolation and Temperature
WEEK 08	L11 : Pressures and Wind
WEEK 09	L12 : Humidity and Precipitation L13 : Weather and Climate
WEEK 10	L14 : Biosphere L15 : Biomes
WEEK 11	L16 : India - Physical Features
WEEK 12	L17 : Climate of India L18 : Natural Disasters
WEEK 13	L19 : Our Resources L20 : Land, Soil and Vegetation Resources in India
WEEK 14	L21 : Our Water Resources L22 : Land Use and Agriculture
WEEK 15	L23 : Development of Mineral and Energy Resources L24 : Industrial Development
WEEK 16	L25 : Transport, Communication and Trade in India
WEEK 17	L26 : Population Density, Distribution and Growth in India
WEEK 18	L27 : Population Composition in India
WEEK 19	L28 : Human Development
WEEK 20	L29 : Human Settlement
WEEK 21	L30A : Local Area Planning OR L30B : Tourism - Concept, Resources and Development
WEEK 22	L31A : Data Collection, Processing and Analysis OR L31B : Development of Infrastructure and Growth of Tourism
WEEK 23	L32A : Recommendations Through Case Studies OR L32B : Prospects and Problems of Tourisms
WEEK 24	Practical L1 and L2
WEEK 25	Practical L3 and L4
WEEK 26	Practical L5

ECONOMICS

(COURSE CODE : 318)



Dr. Manish Chugh
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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.

ABOUT INSTRUCTOR

Dr. Manish Chugh is working as Assistant Director (Academic Economics) with NIOS. Earlier Dr. Chugh has worked with many management colleges and 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 8 years. Besides M.A. and Ph.D. in Economics, He is MIB Gold Medallist. He had the opportunity to act as Programme co-ordinator of PGDBM programme of AIMST Udaipur.

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 and 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 : Price Elasticity of Demand
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 Maximization 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 : Government and The Budget

HOME SCIENCE

(COURSE CODE : 321)



Dr. Sandhya Kumar
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

Home Science trains the learners in life skills and equips both men and women in following aspects through 5 modules and 2 optional modules.

The Art and Science of Managing Home” focuses on concept of the subject in three lessons.

Food and Nutrition details about Food, Nutrition, cooking and Health via six lessons.

Resource Management trains in management of Resources, Time, Energy, Income Space, Household Equipment’s, Environment, Energy and the Consumer.

Human Development includes different aspects of growth and development in different stages of life.

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.

ABOUT INSTRUCTOR

Dr. Sandhya Kumar is working as Deputy Director (Academic) at NIOS, Noida. She has done Ph.D. (Education), M.Ed., M.Sc. (Home Science). She is serving NIOS for more than two decades (15 years as Academic Officer, 5 years as Assistant Director at Regional Centre Dehradun. She intensively involved in organizing variety of workshops and conferences etc. She has 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. She initiated many projects in the Academic Department.

LEARNING OUTCOME

After completing this course, The learner will be able to:

- develop skills that help in bringing a positive change in daily life style & 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	L1 : Home, Family and Home Science
WEEK 02	L2 : Ethics in Daily Life, Family L3 : Health and Security
WEEK 03	L4 : Food, Nutrition and Health L5 : Meal Planning
WEEK 04	L6 : Nutritional Status
WEEK 05	L7 : Purchase and Storage of Food
WEEK 06	L8 : Preparation of Food L9 : Food Preservation
WEEK 07	L10 : Family Resource Management
WEEK 08	L11 : Time and Energy Management
WEEK 09	L12 : Space Management
WEEK 10	L13 : Income Management
WEEK 11	L14 : Energy Conservation L15 : Environment Management
WEEK 12	L16 : Household Equipment
WEEK 13	L17 : Consumer Education
WEEK 14	L18 : Growth and Development (0-5 year)
WEEK 15	L19 : Growth and Development (6-12 year)
WEEK 16	L20 : Adolescence
WEEK 17	L21 : Concerns and Issues in Human Development
WEEK 18	L22 : Introduction to Fabric Science L23 : Yarn and Its Construction
WEEK 19	L24 : Fabric Construction
WEEK 20	L25 : Textile Finishes
WEEK 21	L26 : Selection of Textiles and Clothing
WEEK 22	L27 : Care and Maintenance
WEEK 23	L28A : Introduction to Housekeeping OR L28B : Creative Hand Embroidery
WEEK 24	L29A : Cleaning and Cleaning Materials OR L29B : The Design
WEEK 25	L30A : Maintenance of Premises OR L30B : Colour
WEEK 26	L31A : Aesthetics at Home OR L31B : Embroidery Stitches

PSYCHOLOGY

(COURSE CODE : 328)



Dr. Shweta Verma
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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. This course at Senior Secondary level has been designed in such a way that the learners will know the basics of psychology in simple language.

This field has a large number of opportunities for employment, some of these are:

Clinical Psychologists: Clinical psychologists aim to reduce the distress & 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 like life issues, mental health conditions etc.

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.

Occupational Psychologists: Occupational psychologists apply expert knowledge to all the levels of working and also work on organisational issues like culture and change etc.

There are other options like to work as a rehabilitation counsellor/psychologist, health psychologist, sports psychologist etc.

ABOUT INSTRUCTOR

Dr. Shweta Verma, A Doctorate of Philosophy in Psychology from Himachal Pradesh University. Availed University scholarship during M.A. in Psychology. She has served various government and non government (NGO) institutions in Himachal Pradesh as Psychologist/Counsellor. She has served as a faculty with Shiva Institute of Engineering and Technology Bilaspur, H.P. and worked towards training and mentoring students for soft skills. Apart from this she has worked with the Lovely Professional University, Jalandhar, Punjab as an Assistant professor in Psychology for quite a long time. She is currently working with NIOS for the past two years in the Academic Department. Her passion is to teach and train the learners through various modes of teaching and she believe in learning while teaching. She hope we will have fun learning on this platform. She wish you all a happy learning.

LEARNING OUTCOME

After completing this course, The learner will be able to:

- 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

WEEK 01	L1 : Psychology : Understanding Self and Others
WEEK 02	L2 : How Psychologists Study?
WEEK 03	L3 : Biological and Cultural Shaping of Mind and Behaviour
WEEK 04	L4 : Becoming Aware of the World around Us
WEEK 05	L5 : Attention and Perception
WEEK 06	L6 : Learning Process and Acquiring Skills
WEEK 07	L7 : Remembering and Forgetting
WEEK 08	L8 : Going Beyond the Reality: Thinking and Reasoning
WEEK 09	L9 : Motivation
WEEK 10	L10 : Emotions
WEEK 11	L11 : Development: It's Nature
WEEK 12	L12 : Domains of Development
WEEK 13	L13 : Adolescence
WEEK 14	L14 : Adulthood and Aging
WEEK 15	L15 : Understanding Individual Differences: The Case of Intelligence
WEEK 16	L16 : What is Self?
WEEK 17	L17 : Self and Psychological Processes
WEEK 18	L18 : Personality Theories L19 : Personality Assessment
WEEK 19	L20 : Psychological Disorders L21 : Group Processes L22 : Person Perception and Interpersonal Attraction
WEEK 20	L23 : Man-Environment Interaction
WEEK 21	L24 : Psychotherapy L25 : Health Psychology
WEEK 22	L26A : Education and Work L27A : Career Development L28A : Vocational Choice and Vocational Adjustment
WEEK 23	L29A : Stress and Your Health L30A : Stress Management and Well-Being
WEEK 24	L26B : Developmental Patterns in Early Childhood
WEEK 25	L27B : Play Centre: Objectives L28B : Play Centre: Structural Details
WEEK 26	L29B : Planning and Conducting Programmes L30B : Involvement of Parents and Community in a Play Centre

COMPUTER SCIENCE

(COURSE CODE : 330)



Mrs. B. Radhika
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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:

First module explains about Computer Fundamentals.

Second module explains about C++ programming.

ABOUT INSTRUCTOR

Mrs. B. Radhika works as Academic Officer (ICT) at National Institute of Open Schooling. She completed her post-graduation in Computer Applications (MCA) at Avinashilingam University for Women. She had earlier graduated in Bachelor of Science - Mathematics from Bharatiar University. In addition, she also completed her Bachelor of Education from Tamil Nadu Teachers Education University. She has had 5+ years of intense and dynamic work experience in various projects with multinational clients at NIIT Technologies Ltd., NOIDA and Wipro Technologies Ltd., Greater NOIDA. For the last six years, she has been associated with NIOS for developing and revising the content of ICT courses (Academic & Vocational) of NIOS.

LEARNING OUTCOME

The learner will be able to:

- 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 01	L1 : Anatomy of a Digital Computer
WEEK 02	L2 : Data Processing Concept
WEEK 03	L3 : Computer Software
WEEK 04	L4 : Operating Systems
WEEK 05	L5 : Data Communication and Networking
WEEK 06	L6 : Fundamentals of Internet and Java Programming
WEEK 07	L7 : Introduction to C++
WEEK 08	L8 : General Concept of OOP
WEEK 09	L9 : Control Statements
WEEK 10	L10 : Functions
WEEK 11	L11 : Array
WEEK 12	L12 : Structure, Typedef & Enumerated Data Type
WEEK 13	L13 : Classes & Objects with Constructors/Destructors
WEEK 14	L14 : Inheritance Extending Classes
WEEK 15	L15 : Pointer
WEEK 16	L16 : Files
WEEK 17	Quiz of L1
WEEK 18	Quiz of L2
WEEK 19	Quiz of L3
WEEK 20	Quiz of L4 & L5
WEEK 21	Quiz of L6 & L7
WEEK 22	Quiz of L8 & L9
WEEK 23	Quiz of L10 & L11
WEEK 24	Quiz of L12 & L13
WEEK 25	Quiz of L14 & L15
WEEK 26	Quiz of L16

SOCIOLOGY

(COURSE CODE : 331)



Dr. Sukanta Kumar Mahapatra
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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, 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 and 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 well-being and social development as well. Sociology is among the broadest of the social sciences and thus provides the opportunity for the learners to understand broad range of the social issues operating in the space between individual, community and society.

ABOUT INSTRUCTOR

Dr. Sukanta Kumar Mahapatra is working as an Academic Officer (Sociology) in National Institute of Open Schooling Noida 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 research in Sociology of Education, Pedagogic Theory, Educational Policy and Social Stratification, Open Schooling and E-Learning.

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 & development in society in general and with reference to Indian society in particular.
- extrapolate the different dimensions of Indian society; evaluate social realities objectively.
- 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
WEEK 07	L7 : Social Structure and Social System
WEEK 08	L8 : Norms and Values
WEEK 09	L9 : Status and Role
WEEK 10	L10 : Co-Operation Competition and Conflict
WEEK 11	L11 : Acculturation Assimilation and Integration
WEEK 12	L12 : Marriage
WEEK 13	L13 : Family
WEEK 14	L14 : Kinship
WEEK 15	L15 : Economy Polity and Religion
WEEK 16	L16 : Social Stratification
WEEK 17	L17 : Factors of Social Change
WEEK 18	L18 : Processes of Social Change L19 : Socialization as A Process of Learning
WEEK 19	L20 : Social Control L21 : Social Deviance
WEEK 20	L22 : Society and Environment L23 : Indian Social Thinkers
WEEK 21	L24 : Unity and Diversity L25 : National Integration: Concept and Challenge
WEEK 22	L26 : Indian Society: Tribal Rural and Urban L27 : Caste System in India
WEEK 23	L28 : Major Religious Communities in India L29 : Major Social Problems of India
WEEK 24	L30 : Problems of Scheduled Castes and Scheduled Tribes L31 : Problems of other Deprived Sections
WEEK 25	L32A : Status of Women in Indian Society: A Socio-Historical Perspective OR L33A : Gender Discrimination and Gender Equality L32B : Culture: Concept and Characteristics OR L33B : Indian Cultural Heritage
WEEK 26	L34A : Problems of Women OR L35A : Women's Empowerment and Emancipation L34B : Cultural Pluralism OR L35B : Impact of Media on Culture

PAINTING

(COURSE CODE : 332)



Ms. Sanchita Bhattacharjee
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary
INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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 mention 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.

ABOUT INSTRUCTOR

Ms. Sanchita Bhattacharjee, presently working as a Senior Executive Officer (Performing Arts Education) in National Institute of Open Schooling from July 2001. She holds master degree M.A. in Drawing & 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.

LEARNING OUTCOME

The learner will be able to:

- 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 & 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

PAINTING THEORY SYLLABUS

WEEK 01	L1 : Art of Indus Valley Civilization
WEEK 02	L2 : Art from Maurya To Gupta Period
WEEK 03	L3 : Ajanta Caves
WEEK 04	L4 : Temple Art and Sculpture
WEEK 05	L5 : Indian Bronzes
WEEK 06	L6 : Indo-Islamic Architecture
WEEK 07	L7 : Mughal School
WEEK 08	L8 : Rajasthani School of Painting
WEEK 09	L9 : Pahari School of Miniature Painting
WEEK 10	L10 : Deccan School of Painting
WEEK 11	L11 : Company School
WEEK 12	L12 : Pioneers of Contemporary Art Movements in India
WEEK 13	L13 : Contemporary Art of India
WEEK 14	L14 : Folk Painting

PAINTING PRACTICAL SYLLABUS

WEEK 15	L1 : Object Drawing
WEEK 16	L2 : Nature Study
WEEK 17	L3 : Fundamentals of Painting
WEEK 18	L4 : Composition
WEEK 19	L5 : Sketching from Life and Memory
WEEK 20	L6 : Folk Art as Motif

PAINTING (PRACTICAL GUIDELINES)

LIST OF PRACTICALS

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 movement, mood and 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 26	11. Study of methods and materials of folk art.

ENVIRONMENTAL SCIENCE

(COURSE CODE : 333)



Ms. Neelam Gupta
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary

INTENDED AUDIENCE : School

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)

PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

Environmental Science is a science of the interaction between the physical, chemical and biological components of the environment, including their effects on all organisms but more often refers to human impact on environment. All major components of the environment including origin and evolution of earth and life, ecological principles, contemporary environmental issues, management and conservation covers in this course. The main objective of this course is to increase awareness about environmental issues, explore possible solutions, and lay the foundations for active participation of individual in the protection of environment and the careful and rational use of natural resources. Also provides information related to sustainable the livelihood and human welfare.

ABOUT INSTRUCTOR

Ms. Neelam Gupta has done Masters in Botany, Masters in Philosophy in Botany and B.Ed. from Agra University. She has also done certificate course in Russian from University of Delhi. She has an experience in More than 23 years in the field of School education of Open and distance mode. Her expertise for developing Self Learning Material. Question Bank, Assignments. Audio-video aids and e-content for NIOS learners at OBE, Secondary and Senior Secondary level (Science, Biology and Environmental Science). Her strength is hard worker, self motivating & dedicated towards her work. Her goal is to give best to her organization.

LEARNING OUTCOME

The learner will be able to:

- to know about origin of earth and evolution of life, and appearance of human species.
- to develop concerns for environmental problems.
- to understand ecological principles.
- to harmonize environmental concerns with technological and socio-economic issues.
- to develop respect for nature and living beings and to help maintain ecological balance.

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	L4 : Principles of Ecology
WEEK 04	L5 : Ecosystem
WEEK 05	L6 : Natural Ecosystem
WEEK 06	L7 : 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 Organizations
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

LIBRARY & INFORMATION SCIENCE

(COURSE CODE : 339)



Ms. Manju Chrungu
(Course Coordinator)

TYPE OF COURSE : Sr. Secondary

INTENDED AUDIENCE : Schools

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)

PRE-REQUISITES : 10th Passing Certificate and age 15 years

COURSE OUTLINE

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.

ABOUT INSTRUCTOR

Ms. Manju Chrungu is B.Sc. and 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.

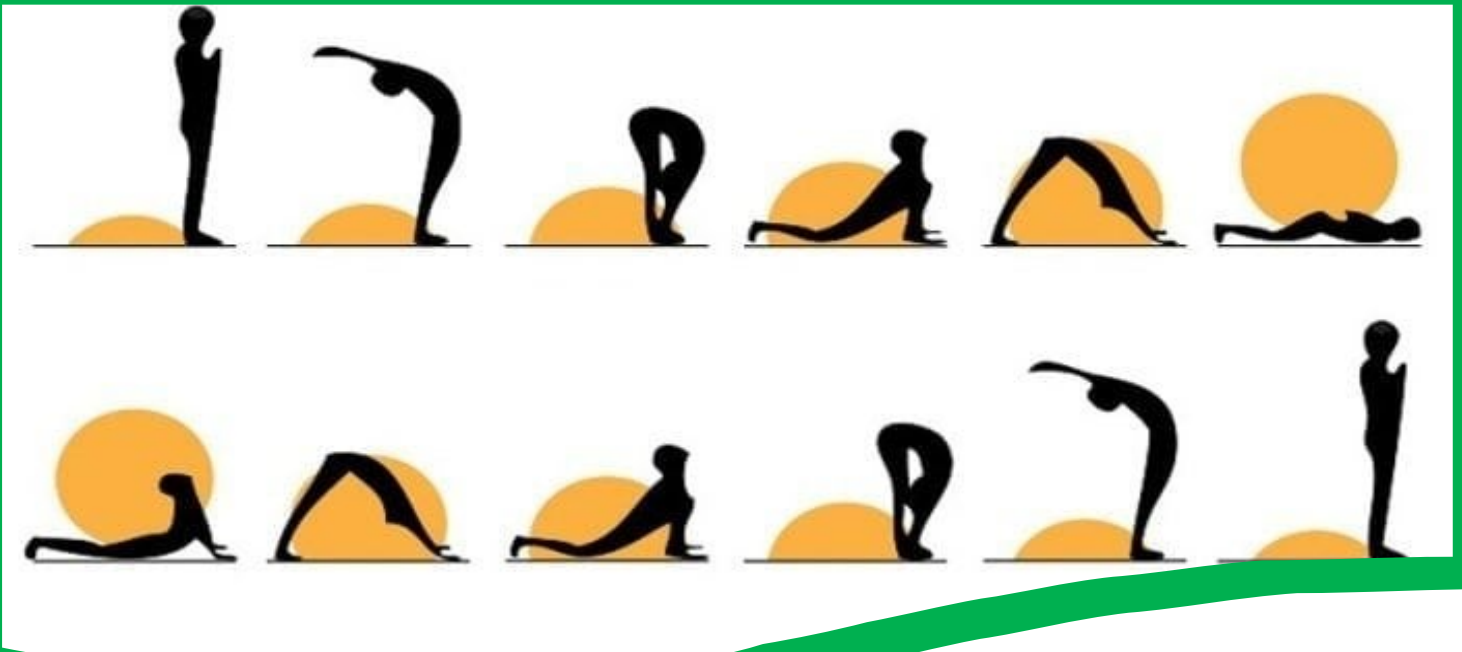
LEARNING OUTCOME

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 uses.
- organize different sources of information.
- develop necessary skills for utilizing the library.
- use of ethical information.
- use various information communication technology (ICT) tools and techniques in library and information science. develop the ability to perceive social realities scientifically.

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	L15A : Library System and Management OR L15B : Information Retrieval System: Concept
WEEK 16	L15A : Library System and Management (Contd...) OR L15B : Information Retrieval System: Concept (Contd...)
WEEK 17	L16A : Library Staff OR L16B : Information Retrieval Tools: Catalogues, Indexes, Subject Heading Lists
WEEK 18	L16A : Library Staff (Contd...) OR L16B : Information Retrieval Tools: Catalogues, Indexes, Subject Heading Lists (Contd...)
WEEK 19	L17A : Library Users OR L17B : Search Techniques: Basic and Advanced
WEEK 20	L17A : Library Users (Contd...) OR L17B : Search Techniques: Basic and Advanced (Contd...)
WEEK 21	L18A : Librarianship as a Career OR L18B : Web Based Search
WEEK 22	L18A : Librarianship as a Career (Contd...) OR L18B : Web Based Search (Contd...)
WEEK 23	Practical (P1, P2, P3 & P4)
WEEK 24	Practical (P5, P6, P7 & P8)
WEEK 25	Practical (P9, P10, P11 & P12)
WEEK 26	Practical (P13, P14 & P15) OR Practical (P16, P17 & P18)



VOCATIONAL COURSE



VOCATIONAL COURSE

1 YOGA TEACHING TRAINING PROGRAMME

PANCHKARMA ASSISTANT

2

3 BEE KEEPING

BEAUTY THERAPY

4

YOGA TEACHING TRAINING PROGRAMME



Dr. P.K. Chauhan
(Course Coordinator)

TYPE OF COURSE : Vocational

INTENDED AUDIENCE : Skills Enhancement

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)

PRE-REQUISITES : Minimum age 14 years and 12th pass student

COURSE OUTLINE

'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 आकर्षित कर रहा है अतः समाज में योग शिक्षा की विशेष रूप से मांग है।

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.

LEARNING OUTCOME

इस यूनिट का अध्ययन करने के बाद आप -

- 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	L1 : योग और यौगिक ग्रन्थ
WEEK 02	L1 : योग और यौगिक ग्रन्थ (Contd...)
WEEK 03	L2 : अष्टांग योग
WEEK 04	L2 : अष्टांग योग (Contd...)
WEEK 05	L3 : यौगिक संस्कृति (नैतिक शिक्षा)
WEEK 06	L3 : यौगिक संस्कृति (नैतिक शिक्षा) (Contd...)
WEEK 07	L4 : मानव शरीर रचना विज्ञान और शरीर क्रिया विज्ञान
WEEK 08	L4 : मानव शरीर रचना विज्ञान और शरीर क्रिया विज्ञान (Contd...)
WEEK 09	L5 : यौगिक आहार
WEEK 10	L5 : यौगिक आहार (Contd...)
WEEK 11	L6 : षट्कर्म
WEEK 12	L6 : षट्कर्म (Contd...)
WEEK 13	L7 : यौगिक सूक्ष्म क्रियाएँ (व्यायाम)
WEEK 14	L7 : यौगिक सूक्ष्म क्रियाएँ (व्यायाम) (Contd...)
WEEK 15	L8 : योग आसान
WEEK 16	L8 : योग आसान (Contd...)
WEEK 17	L9 : प्राणायाम, मुद्रा-बन्ध और ध्यान-साधना
WEEK 18	L9 : प्राणायाम, मुद्रा-बन्ध और ध्यान-साधना (Contd...)
WEEK 19	L10 : योग द्वारा स्वास्थ्य संवर्धन (सभी के लिए योग)
WEEK 20	L10 : योग द्वारा स्वास्थ्य संवर्धन (सभी के लिए योग) (Contd...)
WEEK 21	पुनः अवलोकन
WEEK 22	पुनः अवलोकन
WEEK 23	पुनः अवलोकन
WEEK 24	पुनः अवलोकन
WEEK 25	पुनः अवलोकन
WEEK 26	पुनः अवलोकन

PANCHKARMA ASSISTANT



Ms. Kirti Ailani
(Course Coordinator)

TYPE OF COURSE : Vocational

INTENDED AUDIENCE : Skills Enhancement

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)

PRE-REQUISITES : Minimum age 14 years and 12th pass student

COURSE OUTLINE

यह कोर्स छात्र को कौशल और शिक्षा प्रदान करेगा ताकि छात्र स्वयं नियोक्ता प्राप्त कर सकें। पाठ्यक्रम को पूरा करने के पश्चात, विस्तर 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
- जीवन शैली केन्द्र स्वास्थ्य केन्द्र
- स्वास्थ्य स्पा तथा रिसोर्ट
- आयुर्वेदिक कॉस्मेटिक क्लीनिक आदि में सहायक के रूप में कार्य कर सकते हैं।

ABOUT INSTRUCTOR

Ms. Kirti Ailani is working as Senior Executive Officer (Health & Paramedical) in National Institute of Open Schooling (NIOS), Noida. She is having 4.5 years as Project Manager cum R&D (Biotechnology).

LEARNING OUTCOME

इस यूनिट का अध्ययन करने के बाद आप -

- 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	L1 : सिद्धांत के पंचकर्म
WEEK 02	L1 : सिद्धांत के पंचकर्म (Contd...)
WEEK 03	L2 : स्नेहन और स्वेदन विधि
WEEK 04	L2 : स्नेहन और स्वेदन विधि (Contd...)
WEEK 05	L3 : वमन और विरेचन विधि
WEEK 06	L3 : वमन और विरेचन विधि (Contd...)
WEEK 07	L4 : बस्ति विधि
WEEK 08	L4 : बस्ति विधि (Contd...)
WEEK 09	L5 : नस्य विधि एवं रक्तमोक्षण
WEEK 10	L5 : नस्य विधि एवं रक्तमोक्षण (Contd...)
WEEK 11	L6 : धारा (पिञ्जिचिल)
WEEK 12	L6 : धारा (पिञ्जिचिल) (Contd...)
WEEK 13	L7 : बाह्य बस्ति (शिरो/जानु/कटि बस्ति आदि)
WEEK 14	L7 : बाह्य बस्ति (शिरो/जानु/कटि बस्ति आदि) (Contd...)
WEEK 15	L8 : पोटली स्वेद (पिंड या किषि स्वेदन)
WEEK 16	L8 : पोटली स्वेद (पिंड या किषि स्वेदन) (Contd...)
WEEK 17	L9 : अभ्यंग, उदर्वतन एवं क्रियाकल्प
WEEK 18	L9 : अभ्यंग, उदर्वतन एवं क्रियाकल्प (Contd...)
WEEK 19	L10 : विविध पंचकर्म प्रक्रियाएं
WEEK 20	L10 : विविध पंचकर्म प्रक्रियाएं (Contd...)
WEEK 21	L11 : पंचकर्म में पथ्य-अपथ्य
WEEK 22	L11 : पंचकर्म में पथ्य-अपथ्य (Contd...)
WEEK 23	L12 : पंचकर्म सामग्री
WEEK 24	L12 : पंचकर्म सामग्री (Contd...)
WEEK 25	पुनः अवलोकन
WEEK 26	पुनः अवलोकन

BEE KEEPING



Dr. Neelima Pant
(Course Coordinator)

TYPE OF COURSE : Vocational
INTENDED AUDIENCE : Skills Enhancement

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Minimum age 14 years and 12th pass student

COURSE OUTLINE

मधुमक्खी पालन के विकास की अतिवृहत गुंजाइश है। शहद का वैश्विक उत्पादन लगभग 15% सालाना बढ़ रहा है। वैश्विक उत्पादन का लगभग एक मधुमक्खी पालन के विकास की देश में अतिवृहत गुंजाइश है। शहद का वैश्विक उत्पादन लगभग 15% सालाना बढ़ रहा है। वैश्विक उत्पादन में लगभग एक तिहाई हिस्सा एशिया का है जिसकी भविष्य में 15 से 20% की वृद्धि होने की उम्मीद है। लगभग 15 देश वैश्विक उत्पादन में 90% योगदान देते हैं। प्रमुख शहद उत्पादक देश चीन, भारत, मेक्सिको, यूएसए, अर्जेंटीना, यूक्रेन, तुर्की, रूस हैं। 2010 के बाद से शहद की वैश्विक मांग लगभग 19 हजार टन प्रति वर्ष औसतन बढ़ी है, जिसकी आपूर्ति मुख्य रूप से संयुक्त राष्ट्र अमेरिका द्वारा होती है। 2015-16 में पश्चिम बंगाल, उत्तर प्रदेश, पंजाब और बिहार ने देश के शहद उत्पादन में 61% योगदान दिया। कृषि पर राष्ट्रीय आयोग ने देश में 12 प्रमुख कृषि फसलों को परागण के लिए 150 मिलियन मधुमक्खी उपनिवेशों को तैनात करने की आवश्यकता को देखा। वर्तमान में, उनकी उपज बढ़ाने के लिए 200 मिलियन मधुमक्खी उपनिवेशों की आवश्यकता है जो 215 लाख लोगों को रोजगार प्रदान करेगी और 10 मिलियन टन शहद का उत्पादन करेगी और फसल उत्पादन में वृद्धि होगी। साथ ही वर्ष 2016-17 में हमारे देश से 45,537.99 मीट्रिक टन प्राकृतिक शहद का निर्यात किया है। संयुक्त राज्य अमेरिका, सऊदी अरब, संयुक्त अरब अमीरात, कनाडा और बांग्लादेश शहद के मुख्य निर्यात गंतव्य हैं।

मधुमक्खी पालन के क्षेत्र में कौशल की इन्ही आवश्यकताओं को ध्यान में रखते हुए, NIOS SWAYAM के माध्यम से पाठ्यक्रम "मधुमक्खी पालन" प्रदान करता है। 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।

ABOUT INSTRUCTOR

Dr. Neelima Pant is Academic Officer (Agriculture) at NIOS Headquarters for past 6 years. She has done her Ph.D. (Vegetable Science) with 'Major in Vegetable Science and Minor in Genetics and Plant Breeding' from G.B. Pant University of Agriculture and Technology, Pantnagar, dist. Udham Singh Nagar (Uttarakhand). Previously, She worked as Post-Doctoral Fellow (Horticulture) at Krishi Vigyan Kendra, Ranichauri, Tehri Garhwal and as Senior Research Fellow at GBPUAT, Pantnagar, Uttarakhand.

She is recipient of Young scientist award 2007 at Uttarakhand 2nd State Science Congress held at Nainital, 14-17th Nov, 2007. She has also qualified National Eligibility Test (ICAR), 2006 in Horticulture (Vegetable). She has published 9 research papers and 15 popular articles in various international and national journals and magazines respectively. Her areas of interest are Agriculture and Animal Husbandry, Horticulture and Vegetable Science.

LEARNING OUTCOME

इस पाठ्यक्रम को करने के उपरांत आप निम्नलिखित कार्यों में सक्षम हो जाएंगे -

- बेहतर परागण के लिए मधुमक्खियों, विभिन्न प्रजातियों, उनके जीवन चक्र और व्यवहार विज्ञान 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 एवं प्रसंस्करण संबंधित ज्ञान एवं कौशल।
- मधुमक्खी उत्पाद का विपणन कौशल।
- मधुमक्खी पालन में स्वच्छता और सुरक्षा कार्यों का प्रदर्शन।

COURSE PLAN

WEEK 01	L1 : मधुमक्खी पालन परिचय
WEEK 02	L1 : मधुमक्खी पालन परिचय (Contd...)
WEEK 03	L1 : मधुमक्खी पालन परिचय (Contd...)
WEEK 04	L2 : मधुमक्खियों की दुनिया
WEEK 05	L2 : मधुमक्खियों की दुनिया (Contd...)
WEEK 06	L2 : मधुमक्खियों की दुनिया (Contd...)
WEEK 07	L3 : मधुमक्खी पालन के उपकरण
WEEK 08	L3 : मधुमक्खी पालन के उपकरण (Contd...)
WEEK 09	L4 : मौनालय स्थल का चुनाव
WEEK 10	L4 : मौनालय स्थल का चुनाव (Contd...)
WEEK 11	L5 : मौनालय प्रबन्धन
WEEK 12	L5 : मौनालय प्रबन्धन (Contd...)
WEEK 13	L6 : मौनगृह में नाशीजीव एवं रोग प्रबन्धन
WEEK 14	L6 : मौनगृह में नाशीजीव एवं रोग प्रबन्धन (Contd...)
WEEK 15	L7 : मधुमक्खी प्रजनन
WEEK 16	L7 : मधुमक्खी प्रजनन (Contd...)
WEEK 17	L8 : मौनवंशों का प्रवासन (माइग्रेशन)
WEEK 18	L8 : मौनवंशों का प्रवासन (माइग्रेशन) (Contd...)
WEEK 19	L9 : मौनगृह उत्पादों का उत्पादन, प्रसंस्करण एवं विपणन
WEEK 20	L9 : मौनगृह उत्पादों का उत्पादन, प्रसंस्करण एवं विपणन (Contd...)
WEEK 21	L10 : प्रमुख- उधमिता कौशल
WEEK 22	L10 : प्रमुख- उधमिता कौशल (Contd...)
WEEK 23	पुनः अवलोकन
WEEK 24	पुनः अवलोकन
WEEK 25	पुनः अवलोकन
WEEK 26	पुनः अवलोकन

BEAUTY THERAPY



Dr. Praveen Chauhan
(Course Coordinator)

TYPE OF COURSE : Vocational
INTENDED AUDIENCE : Skills Enhancement

COURSE DURATION : 26 Weeks (1st Aug 2018 to 31st Jan 2019)
PRE-REQUISITES : Minimum age 14 years and 12th pass student

COURSE OUTLINE

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 20% 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।

ABOUT INSTRUCTOR

Dr. Praveen Chauhan is working as Academic Officer (Home Science) in National Institute of Open Schooling (NIOS), Noida. She has done her Ph.D. in "Clothing and Textiles".

LEARNING OUTCOME

The learner will be able to:

- 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 & 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	L1 : कार्य स्थल की तैयारी एवं रखरखाव
WEEK 02	L1 : कार्य स्थल की तैयारी एवं रखरखाव (Contd...)
WEEK 03	L1 : कार्य स्थल की तैयारी एवं रखरखाव (Contd...)
WEEK 04	L2 : त्वचा के बुनियादी उपचार
WEEK 05	L2 : त्वचा के बुनियादी उपचार (Contd...)
WEEK 06	L2 : त्वचा के बुनियादी उपचार (Contd...)
WEEK 07	L3 : अनचाहे बालों को हटाना
WEEK 08	L3 : अनचाहे बालों को हटाना (Contd...)
WEEK 09	L3 : अनचाहे बालों को हटाना (Contd...)
WEEK 10	L4 : मैनीक्योर व पैडीक्योर सेवाएँ
WEEK 11	L4 : मैनीक्योर व पैडीक्योर सेवाएँ (Contd...)
WEEK 12	L4 : मैनीक्योर व पैडीक्योर सेवाएँ (Contd...)
WEEK 13	L5 : केश सज्जा सेवाओं में सहयोग
WEEK 14	L5 : केश सज्जा सेवाओं में सहयोग (Contd...)
WEEK 15	L5 : केश सज्जा सेवाओं में सहयोग (Contd...)
WEEK 16	L6 : मेकअप में सहयोग
WEEK 17	L6 : मेकअप में सहयोग (Contd...)
WEEK 18	L6 : मेकअप में सहयोग (Contd...)
WEEK 19	L7 : ब्यूटी पार्लर की देखभाल
WEEK 20	L7 : ब्यूटी पार्लर की देखभाल (Contd...)
WEEK 21	L7 : ब्यूटी पार्लर की देखभाल (Contd...)
WEEK 22	L8 : कार्यस्थल पर सकारात्मक प्रभाव
WEEK 23	L8 : कार्यस्थल पर सकारात्मक प्रभाव (Contd...)
WEEK 24	L8 : कार्यस्थल पर सकारात्मक प्रभाव (Contd...)
WEEK 25	पुनः अवलोकन
WEEK 26	पुनः अवलोकन



D.EL.ED COURSE



D.EL.ED. COURSES

1

COURSE 501 : ELEMENTARY EDUCATION IN INDIA :
A SOCIO- CULTURAL PERSPECTIVE

2

COURSE 502 : PEDAGOGIC PROCESSES IN
ELEMENTARY SCHOOLS

3

COURSE 503 : LEARNING LANGUAGES AT
ELEMENTARY LEVEL

4

COURSE 504 : LEARNING MATHEMATICS AT
ELEMENTARY LEVEL

5

COURSE 505 : LEARNING ENVIRONMENTAL STUDIES
AT PRIMARY LEVEL

6

COURSE 506 : UNDERSTANDING CHILDREN IN INCLUSIVE CONTEXT
COURSE 507 : COMMUNITY AND ELEMENTARY EDUCATION
COURSE 508 : LEARNING IN ART, HEALTH & PHYSICAL AND
WORK EDUCATION AT ELEMENTARY LEVEL
COURSE 509 : LEARNING SOCIAL SCIENCE AT UPPER PRIMARY LEVEL
COURSE 510 : LEARNING SCIENCE AT UPPER PRIMARY LEVEL

COURSE 501 - ELEMENTARY EDUCATION IN INDIA : A SOCIO-CULTURAL PERSPECTIVE



Dr. Madhur Bhatia
(Course Coordinator)

TYPE OF COURSE : D.EL.ED.

INTENDED AUDIENCE : Untrained
In-Service Teachers

COURSE DURATION : 18 Months (3rd Oct 2017 to 31st Mar 2019)

PRE-REQUISITES : Untrained In-Service Teachers having Senior Secondary
Qualification (or its equivalent) with at least 50% marks in aggregate

COURSE OUTLINE

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 the 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 & activities given at the end of each unit will provide profound understanding of elementary education.

ABOUT INSTRUCTOR

Dr. Madhur Bhatia is Academic Officer in Teacher Education at NIOS Headquarter for 5 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 has 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 to May 2012. Her areas of interest are Teacher Education, Educational Technology, Early Childhood Care and Education, Emotional Intelligence, Curriculum Development and Gender issues.

LEARNING OUTCOME

The learner will be able to:

- 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 - L1 : Indian Education System - I
WEEK 02	BLOCK 1 - L1 : Indian Education System - I (Contd...)
WEEK 03	BLOCK 1 - L2 : Indian Education System – II
WEEK 04	BLOCK 1 - L2 : Indian Education System – II (Contd...)
WEEK 05	BLOCK 1 - L3 : Education as a Fundamental Right
WEEK 06	BLOCK 1 - L3 : Education as a Fundamental Right (Contd...)
WEEK 07	BLOCK 1 - L4 : Organization Structure for UEE
WEEK 08	BLOCK 1 - L4 : Organization Structure for UEE (Contd...)
WEEK 09	BLOCK 2 - L5 : Strategies for UEE - I
WEEK 10	BLOCK 2 - L5 : Strategies for UEE - I (Contd...)
WEEK 11	BLOCK 2 - L6 : Strategies for UEE - II
WEEK 12	BLOCK 2 - L7 : Planning & Management of UEE
WEEK 13	BLOCK 3 - L8 : Preparing Teachers for Elementary Education
WEEK 14	BLOCK 3 - L8 : Preparing Teachers for Elementary Education (Contd...)
WEEK 15	BLOCK 3 - L9 : Education of Disadvantaged Students
WEEK 16	BLOCK 3 - L9 : Education of Disadvantaged Students (Contd...)
WEEK 17	BLOCK 3 - L10 : International Scenarios in Elementary Education

COURSE 502 - PEDAGOGIC PROCESSES IN ELEMENTARY SCHOOLS



Dr. Manoj Thakur
(Course Coordinator)

TYPE OF COURSE : D.EL.ED.

INTENDED AUDIENCE : Untrained
In-Service Teachers

COURSE DURATION : 18 Months (3rd Oct 2017 to 31st Mar 2019)

PRE-REQUISITES : Untrained In-Service Teachers having Senior Secondary
Qualification (or its equivalent) with at least 50% marks in aggregate

COURSE OUTLINE

Teaching skills are important component to determine the quality of a teacher. Teaching is a profession which requires development of the feelings and skills of harnessing the good qualities in a learner. Untrained teachers remain deprived of becoming aware realizing many good qualities of a teacher. The crux of all pedagogic efforts is to enhance the quality and extent of learning experience of children within 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 the 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 able to 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.

ABOUT INSTRUCTOR

Dr. Manoj Thakur is Research and Evaluation Officer at NIOS Headquarter. He is Ph.D. in Education. His areas of interest are Open and Distance Education, Curriculum Development and Educational Technology.

LEARNING OUTCOME

The learner will be able to:

- To help the teachers in understanding the nature of children and the ways children learn in the school/classroom situation.
- To develop capacities of teachers to reflect, reason and make conceptual understanding of pedagogic practices and learning process
- To empower the 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 use those effectively to promote classroom learning and
- 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 - L1 : Learning and Teaching During Early Schooling
WEEK 02	BLOCK 1 - L2 : Approaches to Learning and Teaching
WEEK 03	BLOCK 1 - L3 : Methods of Learning and Teaching
WEEK 04	BLOCK 1 - L4 : Learner and Learning - Centred Approaches and Methods
WEEK 05	BLOCK 2 - L5 : Management of Classroom Processes
WEEK 06	BLOCK 2 - L6 : Teaching and Learning Materials
WEEK 07	BLOCK 2 - L7 : Management of Multi-Grade and Multi-Level Situations
WEEK 08	BLOCK 3 - L8 : Planning Learning Activities
WEEK 09	BLOCK 3 - L9 : Integrated Learning - Teaching Processes
WEEK 10	BLOCK 3 - L10 : Contextualizing Learning Processes for Disadvantaged Learners and Materials
WEEK 11	BLOCK 3 - L11 : ICT in Learning
WEEK 12	BLOCK 3 - L12 : Computer - Assisted Learning
WEEK 13	BLOCK 4 - L13 : Basics of Assessment and Evaluation
WEEK 14	BLOCK 4 - L14 : Tools and Strategies of Assessment
WEEK 15	BLOCK 4 - L15 : Using the Results of Assessment for Improving Learning
WEEK 16	BLOCK 4 - L16 : Learning and Assessment

COURSE 503 - LEARNING LANGUAGES AT ELEMENTARY LEVEL



Mr. Chanchal Kumar Singh
(Course Coordinator)

TYPE OF COURSE : D.EL.ED.

INTENDED AUDIENCE : Untrained
In-Service Teachers

COURSE DURATION : 18 Months (3rd Oct 2017 to 31st Mar 2019)

PRE-REQUISITES : Untrained In-Service Teachers having Senior Secondary
Qualification (or its equivalent) with at least 50% marks in aggregate

COURSE OUTLINE

Language and language teacher both are essential to the academic landscape. The course 503 - Learning Language at Elementary Level has been developed to enable you to know about various aspects of language. This course is all about nature of language, language usage, and psycho-social aspects of language. This course will give you an idea about language learning and language teaching methods including Listening, speaking, reading and writing skills. 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.

ABOUT INSTRUCTOR

Mr. Chanchal Kumar Singh is currently working as Training Officer (Languages/Linguistics/Literature) in National Institute of Open Schooling (NIOS) Noida. He has completed his M.A., B.Ed. and Diploma of Translator. He is having around 13 years of teaching experience in different Educational Institutions. He has organised number of Workshops in collaboration with Government organisations to promote language, science and games & sports in north east states of India. He has also imparted military training as a lieutenant (Associated NCC Officer) in National Cadet Corps (NCC).

LEARNING OUTCOME

The learner will be able to:

- 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

WEEK 01	BLOCK 1 - L1 : What is Language?
WEEK 02	BLOCK 1 - L1 : What is Language? (Contd...)
WEEK 03	BLOCK 1 - L2 : Indian Languages
WEEK 04	BLOCK 1 - L2 : Indian Languages (Contd...)
WEEK 05	BLOCK 1 - L3 : Language Learning and Teaching
WEEK 06	BLOCK 1 - L3 : Language Learning and Teaching (Contd...)
WEEK 07	BLOCK 2 - L4 : Listening and Speaking
WEEK 08	BLOCK 2 - L4 : Listening and Speaking (Contd...)
WEEK 09	BLOCK 2 - L5 : Reading
WEEK 10	BLOCK 2 - L5 : Reading (Contd...)
WEEK 11	BLOCK 2 - L6 : Writing
WEEK 12	BLOCK 2 - L6 : Writing (Contd...)
WEEK 13	BLOCK 3 - L7 : Literature and Language
WEEK 14	BLOCK 3 - L8 : Language Teaching Methods in Classroom Settings
WEEK 15	BLOCK 3 - L9 : Educational Materials : Some New Dimensions
WEEK 16	BLOCK 3 - L10 : Assessment

COURSE 504 - LEARNING MATHEMATICS AT ELEMENTARY LEVEL



Dr. Ram Singh
(Course Coordinator)

TYPE OF COURSE : D.EL.ED.

INTENDED AUDIENCE : Untrained
In-Service Teachers

COURSE DURATION : 18 Months (3rd Oct 2017 to 31st Mar 2019)

PRE-REQUISITES : Untrained In-Service Teachers having Senior Secondary
Qualification (or its equivalent) with at least 50% marks in aggregate

COURSE OUTLINE

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-centred methodologies.

ABOUT INSTRUCTOR

Dr. Ram Singh is Member of Quality Development of Higher Education, Govt. of Jharkhand. He is Ambassador of Mission Knowledge - UNESCO. He is Member of APEX Body of the Academic Committee - NIOS. He is awarded National CBSE Teachers Award 2015 President, Ranchi Sarodiya School Complex. He is Eminent Educationist Award by Hindustan (A leading Media group) in 2012. He also awarded the prestigious prize for innovations and excellence in School Education from ASSCHOM. He also got Best Principal Award by Hindustan Media and Science Olympiad Foundation. He also honoured PRATIBHA SAMAAAN 2015 by Prabhat Khabar given by the Honourable Governor of Jharkhand. He has got International School Award (ISA) from the British Council 2015-18. He also received Avantika Priyadarshani Award 2015 & Guru Siksha Samman Award 2016. He awarded for the immense contribution in the field of Education by Loins Club in 2016. He also received Excellence Award 2016 from the Government of Jharkhand.

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 & teaching of mathematics.
- acquire skills of assessing the young children's learning and performance in Mathematical concepts and in using those in the enhancing their understanding and performance in Mathematics.

COURSE PLAN

WEEK 01	Introduction
WEEK 02	BLOCK 1 - L1 : How Children Learn Mathematics?
WEEK 03	BLOCK 1 - L1 : How Children Learn Mathematics? (Contd...)
WEEK 04	BLOCK 1 - L2 : Mathematics and Mathematics Education
WEEK 05	BLOCK 1 - L2 : Mathematics and Mathematics Education (Contd...)
WEEK 06	BLOCK 1 - L3 : Goals and Vision of Mathematics Education
WEEK 07	BLOCK 1 - L3 : Goals and Vision of Mathematics Education (Contd...)
WEEK 08	BLOCK 1 - L4 : Learner and Learning - Centred Methodologies at Elementary Level
WEEK 09	BLOCK 1 - L4 : Learner and Learning - Centred Methodologies at Elementary Level (Contd...)
WEEK 10	BLOCK 2 - L5 : Numbers and the Operation on Numbers
WEEK 11	BLOCK 2 - L5 : Numbers and the Operation on Numbers (Contd...)
WEEK 12	BLOCK 2 - L6 : Shapes and Spatial Understanding
WEEK 13	BLOCK 2 - L6 : Shapes and Spatial Understanding (Contd...)
WEEK 14	BLOCK 2 - L7 : Measures & Measurements
WEEK 15	BLOCK 2 - L7 : Measures & Measurements (Contd...)
WEEK 16	BLOCK 2 - L8 : Data Handling
WEEK 17	BLOCK 2 - L8 : Data Handling (Contd...)
WEEK 18	BLOCK 2 - L9 : Algebra as Generalized Arithmetic
WEEK 19	BLOCK 2 - L9 : Algebra as Generalized Arithmetic (Contd...)
WEEK 20	BLOCK 3 - L10 : Approaches to Assessment of Learning Mathematics
WEEK 21	BLOCK 3 - L10 : Approaches to Assessment of Learning Mathematics (Contd...)
WEEK 22	BLOCK 3 - L11 : Tools and Techniques of Assessment
WEEK 23	BLOCK 3 - L11 : Tools and Techniques of Assessment (Contd...)
WEEK 24	BLOCK 3 - L12 : Follow up of Assessment of Learning Mathematics
WEEK 25	BLOCK 3 - L12 : Follow up of Assessment of Learning Mathematics (Contd...)

COURSE 505 - LEARNING ENVIRONMENTAL STUDIES AT PRIMARY LEVEL



Dr. Babli Choudhury
(Course Coordinator)

TYPE OF COURSE : D.EL.ED.

INTENDED AUDIENCE : Untrained In-Service Teachers

COURSE DURATION : 18 Months (3rd Oct 2017 to 31st Mar 2019)

PRE-REQUISITES : Untrained In-Service Teachers having Senior Secondary Qualification (or its equivalent) with at least 50% marks in aggregate

COURSE OUTLINE

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 the 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 primary stage of education.

We hope that you will find this Course useful in accomplishing the mission of environmental studies in formal education.

ABOUT INSTRUCTOR

Dr. Babli Choudhury is an Assistant Professor (M.Ed Classes), Gauhati University, Guwahati. She has attained M.A. in Education, Sociology and Social Work, B.Ed. She has 15 Years of Teaching Experience. She also published 30 papers in National Journals and 20 papers in International Journals. She also associated with CCRT, NCTE, SCERT Guwahati.

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	Introduction
WEEK 02	BLOCK 1 - L1 : Importance of Environment at the Early Stage of Learning
WEEK 03	BLOCK 1 - L1 : Importance of Environment at the Early Stage of Learning (Contd...)
WEEK 04	BLOCK 1 - L1 : Importance of Environment at the Early Stage of Learning (Contd...)
WEEK 05	BLOCK 1 - L2 : Objectives and Scope of Teaching - Learning EVS at the Primary Stage
WEEK 06	BLOCK 1 - L2 : Objectives and Scope of Teaching - Learning EVS at the Primary Stage (Contd...)
WEEK 07	BLOCK 1 - L3 : Pedagogical Considerations of Teaching - Learning EVS
WEEK 08	BLOCK 1 - L3 : Pedagogical Considerations of Teaching - Learning EVS (Contd...)
WEEK 09	BLOCK 1 - L3 : Pedagogical Considerations of Teaching - Learning EVS (Contd...)
WEEK 10	BLOCK 1 - L3 : Pedagogical Considerations of Teaching - Learning EVS (Contd...)
WEEK 11	BLOCK 1 - L4 : Curricular Provisions of EVS at the Primary Stage
WEEK 12	BLOCK 1 - L4 : Curricular Provisions of EVS at the Primary Stage (Contd...)
WEEK 13	BLOCK 2 - L5 : Approaches for Teaching - Learning EVS
WEEK 14	BLOCK 2 - L6 : Methods of Teaching - Learning EVS
WEEK 15	BLOCK 2 - L6 : Methods of Teaching - Learning EVS (Contd...)
WEEK 16	BLOCK 2 - L6 : Methods of Teaching - Learning EVS (Contd...)
WEEK 17	BLOCK 2 - L6 : Methods of Teaching - Learning EVS (Contd...)
WEEK 18	BLOCK 2 - L7 : Planning Teaching and Learning of EVS
WEEK 19	BLOCK 2 - L7 : Planning Teaching and Learning of EVS (Contd...)
WEEK 20	BLOCK 2 - L7 : Planning Teaching and Learning of EVS (Contd...)
WEEK 21	BLOCK 2 - L8 : Resources and Materials for Teaching - Learning of EVS
WEEK 22	BLOCK 2 - L8 : Resources and Materials for Teaching - Learning of EVS (Contd...)
WEEK 23	BLOCK 2 - L8 : Resources and Materials for Teaching - Learning of EVS (Contd...)
WEEK 24	BLOCK 2 - L8 : Resources and Materials for Teaching - Learning of EVS (Contd...)
WEEK 25	BLOCK 3 - L9 : Assessing Learning in EVS
WEEK 26	BLOCK 3 - L9 : Assessing Learning in EVS (Contd...)
WEEK 27	BLOCK 3 - L10 : Tools and Techniques for Assessing Learning in EVS
WEEK 28	BLOCK 3 - L10 : Tools and Techniques for Assessing Learning in EVS (Contd...)
WEEK 29	BLOCK 3 - L10 : Tools and Techniques for Assessing Learning in EVS (Contd...)
WEEK 30	BLOCK 3 - L11 : Using Assessment Results for Enhancement of Students' Understanding
WEEK 31	BLOCK 3 - L11 : Using Assessment Results for Enhancement of Students' Understanding (Contd...)

COURSE 506 - 510



Dr. Asheesh Srivastava
Coordinator (Course-506)



Dr. Madhusudan J.V.
Coordinator (Course-507)



Dr. Azmat Noori
Coordinator (Course-508)



Dr. Babli Choudhury
Coordinator (Course-509)



Mr. Ravikant
Coordinator (Course-510)

TYPE OF COURSE : D.EL.ED.

INTENDED AUDIENCE : Untrained
In-Service Teachers

COURSE DURATION : 18 Months (3rd Oct 2017 to 31st Mar 2019)

PRE-REQUISITES : Untrained In-Service Teachers having Senior Secondary Qualification (or its equivalent) with at least 50% marks in aggregate

Course 506 : Understanding Children in Inclusive Context

COURSE OUTLINE

This course is designed for teachers to understand childhood and children at the elementary stage. This is a foundation course upon which teaching skills and competencies are based. The purpose of course is to equip you with the background knowledge that needs to develop an understanding of the elementary school child and his/her socio-cultural contexts. It seeks to develop and build sensitivity towards special needs of the children so as to make the classroom environment healthy and efficient.

Course 507 : Community and Elementary Education

COURSE OUTLINE

This course will help teachers understand the interface between education and society regarding elementary education to India. It introduces the relationship between teacher & community for school development. The programme showed the partnership among the school and society to improve quality of elementary education as per the needs of the community. The school should be located at a place which is easily accessible to all children. The discussion will empower teachers as how to communicate with children as well as community so as to enrol, retain & move towards better learning achievement.

Course 508 : Learning in Art, Health & Physical and Work Education at Elementary Level

COURSE OUTLINE

Arts Education offers a significant opportunity for creative expression among the learners. It helps in enhancing the life-skills, inculcating values and developing sensitivity to understand and respect the culture of a society. Health and Physical Education is an integral part of school education at all levels. Research in the field of health and physical education has given rise to new methods as well as skills for effective teaching learning process in the subject at school level. This course provides an opportunity to the teacher trainees to understand the importance of work, including manual work, as an integral part of school education. It provides an insight to identify various types of age appropriate activities for children keeping in view the local specific needs.

Course 509 : Learning Social Science at Upper Primary Level

COURSE OUTLINE

The contents of Social Science/Social Studies as a school subject are based on a certain understanding about their nature and purposes. Instead of treating these as natural & given, this course introduces student-teachers to different perspectives about these subjects. It would also examine the ways in which different visions and understanding of subjects get reflected in different curriculum, syllabus and textbooks. It asks and suggests How social sciences can develop capacities to critically understand society and social reality around us with reference to time, space and power, structures, institutions, processes and relationships.

Course 510 : Learning Science at Upper Primary Level

COURSE OUTLINE

The Scientific method involves observing, looking for patterns, making guesses, checking their validity through experimentation, and thus arriving at principles, theories and laws governing the physical world.



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