

## List of skill enhancement courses

- 1.Environmental studies
- 2.Gendersensitization
- 3.Basic computer skills
- 4.Communicative skills in English
- 5.Quantitative aptitude
- 6.Practices of general insurance
- 7.Regulations of insurance business
- 8.Humanvalues and ethics
- 9.Enterprenuership and development
- 10.Vermiculture
- 11.Basic instrumentation
- 12.Practice of life &general insurance
- 13.Rural development
14. Remedial methods for pollution- drinking water and soil fertility
- 15.Biofertilizers and organic forming
- 16.Foundation of digital marketing andweb designing
- 17.Leadership and management skills

**BC 602: WATER RESOURCES MANAGEMENT**

Paper: BC602

PPW: 2 Hrs

Max. Marks: 40+10

Exam Duration: 1½ hrs

**UNIT-I**

1. Importance of Natural Resources – Different Types and Resources
2. Significance of Water Resources and their uses
3. Conservation of water and recycling of the water – Global distribution of water
4. Water shed programmes and their management
5. Storing the rain water in tanks and recharging ground water

**Unit-II**

6. Rain water harvesting in rural areas (*checkdam, trenches etc.,*)
7. Overuse of surface and ground water and control measures.
8. Aims, objectives and implementation of *Mission Bhagiratha* (Telangana Government Drinking water programme)
9. Aims, objectives and implementation of *Mission Kakatiya* (Telangana Government minor irrigation programme)
10. Issues and challenges in Water Resources Management

SKILL ENHANCEMENT COURSE IV  
FOR ALL ARTS COURSES  
SEMESTER VI ( UNDER CBCS )  
SOFT SKILLS

CREDITS:2

**I: Personality Development:** Personality Development: Meaning- Characteristics – Influencing factors – Ingredients of pleasing personality. Learning: Meaning – Characteristics – Significance – Principles of learning. Self esteem: Meaning – Characteristics – Significance – Developing self esteem.

**II: Self Management:** Attitude Development: Meaning – Characteristics – Significance – Developing Positive Attitude. Achievement Motivation: Meaning – Characteristics – Significance – Setting for achievement – Strategies of achievement motivation. Emotional Intelligence: Meaning – Characteristics – Significance – Strategies of developing emotional intelligence: Fear, Stress and Anxiety.

**Suggested Readings:**

1. Sarma V S Veluri & Muralidhar D., Personal Empowerment: LOTUS Series - Interactive Learning, CAMFL Limited, 2017.
2. Sarma V S Veluri and Others., Jeevan nipunyaalu: LOTUS Series, (Telugu), CAMEL Limited, 2017.

## ENVIRONMENTAL STUDIES

### **UNIT - I : ECOSYSTEM, BIODIVERSITY & NATURAL RESOURCES : ( 15 hrs. )**

1. Definition, Scope & Importance of Environmental Studies.
2. Structure of Ecosystem – Abiotic & Biotic components Producers, Consumers, Decomposers, Food chains, Food webs, Ecological pyramids)
3. Function of an Ecosystem :Energy flow in the Ecosystem (Single channel energy flow model)
4. Definition of Biodiversity , Genetic, Species & Ecosystem diversity , Hot-spots of Biodiversity, Threats to Biodiversity , Conservation of Biodiversity (Insitu & Exsitu )
5. Renewable & Non – renewable resources, Brief account of Forest , Mineral & Energy (Solar Energy & Geothermal Energy) resources
6. Water Conservation, Rain water harvesting & Watershed management.

### **UNIT – II : ENVIRONMENTAL POLLUTION , GLOBAL ISSUES & LEGISLATION :**

**(15 hrs.)**

1. Causes, Effects & Control measures of Air Pollution, Water Pollution
2. Solid Waste Management
3. Global Warming & Ozone layer depletion.
4. Ill – effects of Fire- works
5. Disaster management – floods, earthquakes & cyclones
6. Environmental legislation :-  
(a) Wild life Protection Act (b) Forest Act (c) Water Act (d) Air Act
7. Human Rights
8. Women and Child welfare
9. Role of Information technology in environment and human health

### **FIELD STUDY:**

**hrs.)**

- Pond Ecosystem
- Forest Ecosystem

**(5**

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**SKILL ENHANCEMENT COURSE 4**

**Paper SEC-4(a): SOCIAL MEDIA MARKETING, SEARCH ENGINE  
OPTIMIZATION & ONLINE ADVERTISING**

**SEC 4A**

**Objective:**

- I. To make students to understand the Social Media marketing.
- II. To make students to understand the Search engine optimization and online advertising.

**UNIT I: SOCIAL MEDIA MARKETING:**

Building an online community – Understanding Social Media Marketing – Marketing and building presence on Facebook – Marketing and building presence on Twitter – Employer branding on LinkedIn

Facebook advertising overview – How Facebook ads work – How to create Facebook ads – Additional advertising options and best practices for Facebook advertising – Marketing and monetizing on YouTube – Customize your YouTube Channel – Video optimization on YouTube

– YouTube Analytics

**UNIT II: SEO FOUNDATION & STRATEGIES:**

Understanding SEO — Content optimization – Long-term content planning

Keyword strategy – Linkbuilding strategies – Measuring SEO effectiveness – SEO for Ecommerce – Local search – Mobile SEO UNIT

Pay-Per-Click Advertising – Getting started with Google Adwords – Advertising tracking – Key Google Adwords strategies – Remarketing with Google – Budget and ROI tips – B2B Remarketing Campaigns

**SUGGESTED READINGS:**

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson

3. Digital Marketing by Vandana Ahuja, Oxford
4. Tuten: Social Media Marketing, Sage
5. Digital Marketing by Seema Gupta, McGraw Hill
6. Social Media Marketing All-In-One for Dummies By Jan Zimmerman and Deborah Ng
7. Facebook Growth Hacking: How to Correctly Set Up and Maintain Your Facebook Presence and Gain Massive Amounts of Fans (Social Media Marketing) by Jeff Abston
8. Youtube Influencer: How To Become a Youtube Influencer, Why Influencer Marketing Matters, and How To Monetize Your Channel by Jeff Abston
9. SEO Fitness Workbook: 2018 Edition: The Seven Steps to Search Engine Optimization Success on Google By Jason McDonald
10. The Art of SEO: Mastering Search Engine Optimization By Eric Enge, Stephan Spencer and Jessie Stricchiola
11. Google Adwords for Beginners: A Do-It-Yourself Guide to PPC Advertising By Cory

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**B.A. ALL STREAMS**  
**SKILL ENHANCEMENT COURSE 4**  
**Semester - IV**  
**SEC-4(A) ENTREPRENEURSHIP AND DEVELOPMENT**

**Module-I Basic Issues of Entrepreneurship and Economic Development**

Basic features of Entrepreneurship, Entrepreneurship and its linkages with economic development, Growth of entrepreneurship in India- Role of entrepreneurship in Economic Development and problems of rural entrepreneurship in India.

**Module-II Financial Resources for new ventures of an entrepreneur:**

Source of finance, capital structure, Institutional support to enterprises- National Small Industries Board- State Small Industries Development Corporation- District Industrial estates- Indian Experience, Stages of growth, types of growth strategies of expansion, Diversification, joint venture, merger and subcontracting.

References:

1. S.S. Khanka Entrepreneurial Development, S Chand & Company Ltd.
2. David . H. Holt- Entrepreneurship New Venture Criterion
3. Poornima M. Entrepreneurship Development and Small Business Enterprises (2<sup>nd</sup> Edition Pearson)
4. Datt and Sundaram (Revised by A. Mahjan), Indian Economy, 70<sup>th</sup> Edition, S Chand.

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## Course 1: Communication Skills

### *Context and Justification :*

Communication plays an important role in shaping an individual's life, personal as well as professional. Also it is the backbone of any organisation/institution. Success in life to a considerable extent depends on effective communication skills. In today's world of computers and digital media, a strong communication skill base is essential for learners and for smooth functioning of an organisation.

### *Objectives :*

This course has been developed with the following objectives:

1. Identify common communication problems that may be holding learners back
2. Identify what their non-verbal messages are communicating to others
3. Understand role of communication in teaching-learning process
4. Learning to communicate through the digital media
5. Understand the importance of empathetic listening
6. Explore communication beyond language.

### *Expected Outcome :*

By the end of this program participants should have a clear understanding of what good communication skills are and what they can do to improve their abilities.

**Credit: 02**

**Duration: 30 Hours**

**Number & Titles of Modules:**

**Total of 7 Modules**

<b>Module 1</b>	<b>Listening</b>	<b>4 Hours</b>
<b>Module 2</b>	<b>Speaking</b>	<b>6 Hours</b>
<b>Module 3</b>	<b>Reading</b>	<b>3 Hours</b>
<b>Module 4</b>	<b>Writing and different modes of writing</b>	<b>4 Hours</b>
<b>Module 5</b>	<b>Digital Literacy</b>	<b>4 Hours</b>
<b>Module 6</b>	<b>Effective use of Social Media</b>	<b>4 Hours</b>
<b>Module 7</b>	<b>Non-verbal communication</b>	<b>5 Hours</b>



**Biofertilizers and organic farming** (15h)

## UNIT - I:

1. Manures and Biofertilizers: Types of fertilizers, manures. Manure composition. Manures for crop productivity.
2. Differences between fertilizers and biofertilizers: pH changes and water contamination.
3. Bacterial Biofertilizers: General account on the microbes used as biofertilizer.
4. Algal Biofertilizers: Associative effect of different microorganisms. *Azolla* and *Anabaena-azollae* association, nitrogen fixation, factors affecting growth, *Azolla* in rice cultivation.

## UNIT - II:

(15h)

5. Fungal Biofertilizers: Mycorrhizal association, types of mycorrhizal association, occurrence and distribution, phosphorus nutrition, growth and yield, colonization of VAM – isolation and inoculum production of VAM, and its influence on growth and yield of crop plants.
6. Organic Farming: Green manuring and organic fertilizers, Recycling of bio-degradable municipal, agricultural and industrial wastes, Biocompost making- types, method of vermicomposting, Panchakavya. Biological pest control (neem).

**Suggested Readings**

1. Dubey R.C. 2005. A Text book of Biotechnology. S.Chand & Co. New Delhi.
2. Kumaresan V. 2005. Biotechnology. Saras Publications. New Delhi.
3. John Jothi Prakash E. 2004. Outlines of Plant Biotechnology. Emkay Publication. New Delhi.
4. Sathe T.V. 2004. Vermiculture and Organic Farming. Daya Publishers. New Delhi.
5. Subha Rao N.S. 2000. Soil Microbiology, Oxford & IBH Publishers. New Delhi.
6. Vayas S.C, Vayas S. and Modi H.A. 1998. Bio-fertilizers and organic Farming Akta Prakashan. Nadiad.

## Course 3: Leadership and Management Skills

the personal values and apply ethical principles in professional and social contexts.

### *Context with Justification :*

Leaders are foundations of the society, who face and win against adversities and odds of life. Through their words and deeds, they show path to others and transform into inspirational rolemodels, affecting social life vividly. In the current times of cut-throat competitions, disbelief in values, techno-centric complex lifestyles, there is a dire need to emphasise the 'human' agency in community living. This can be done by cultivating and nurturing the innate leadership skills of the youth so that they may transform these challenges into opportunities and become torch bearers of the future by developing creative solutions.

### *Objectives :*

The Module is designed to:

- Help students to develop essential skills to influence and motivate others
- Inculcate emotional and social intelligence and integrative thinking for effective leadership
- Create and maintain an effective and motivated team to work for the society
- Nurture a creative and entrepreneurial mindset
- Make students understand

## (A) RURAL DEVELOPMENT

### **Module-I Aspects of Rural Development**

Concept of Rural Development, Rural Development vs. Agricultural Development, Role of NGOs in Rural Development, Rural Non farm sector and Rural Development, Decentralized planning and Participatory development, role Panchayats in decentralized in rural development.

### **Module-II Rural Credit and Self Help Groups**

Role of National Bank for Agriculture and Rural Development (NABARD) for rural development, Constraints of micro-enterprises in rural areas, credit need for rural non farm sector, the concept of micro credit, Micro credit role of Grameen Bank, SHG's in India Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and rural development.

### References

1. Katar Singh , Rural Development : Principles, Policies and Management, Sage Publications, New Delhi
2. K.G. Karmakar, Rural Credit and Self-Help Groups, Sage Publications, New Delhi
3. S.Sau, Rural Industrialization –Development Trajectory in India, Farma K.L.M., Kolkata
4. Misra D. and Puri K. Indian Economy, Himalaya Publishing House
5. Datt and Sundharam (Revised by G.Datt and A. Mahajan) , Indian Economy, 70th edition, S.Chand
6. N. Narayanasami, Participatory Rural Appraisal: Principle, Methods and Applications, Sage Publications, New Delhi, 2009.
7. Vasant Desai, A Study of Rural Economics, Himalaya Publishing House, New Delhi.
8. Mahi Pal, —Panchayati Raj and Rural governance□, Economic and Political Weekly, Jan. 10-16, vol. XXXIX, 2004, No.2, p.13 16.
9. Raghava, D. V. Rao, Panchayats and Rural Development, Ashish Publishing House, New Delhi, 1980.
10. Ram Reddy, Pattern of Panchayati Raj in India, Heritage Publishers, New Delhi, 2

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## **B.Sc. -PHYSICAL SCIENCES**

### **Semester III**

#### **Skill Enhancement Course- II (SEC –II) (2 Credits)**

#### **SEC 2(A) REMEDIAL METHODS FOR POLLUTION, DRINKING WATER**

#### **AND SOIL**

#### **FERTILITY STANDARDS**

#### **UNIT I: Remedial Methods for Pollution Prevention and control of air pollution** **15 h (1 hr/week)**

Ozone hole-causes and harm due to ozone depletion. The effect of CFC's in Ozone depletion and their replacements. Global Warming and Greenhouse Effect Precautions to control global warming. Deleterious effect of pollutants - Endangered Monuments- acid rain. Precautions to protect monuments. Sources of Radiation pollution - Chernobyl accident and its Consequences. Radiation effect by the usage of cell phones and protection tips. Deleterious effects of cell phone towers and health hazards.

Sources of water pollution-(i). Pollution due to pesticides and inorganic chemicals, (ii). Thermal pollution (iii). Ground water pollution (iv). Eutrophication.

Methods for control of water pollution and water recycling. Dumping of plastics in rivers & oceans and their effect on aquatic life. Determination of (i) Dissolved Oxygen and (ii) Chemical Oxygen Demand in polluted water - Illustration through charts (or) demonstration of experiments. Sources of soil pollution (i). Plastic bags, (ii). Industrial and (iii). Agricultural sources. Control of soil pollution. Environmental laws in India. Environmental benefits of planting trees.

#### **UNIT II: Drinking Water and Soil Fertility Standards and Analysis 15 h (1 hr/week)**

##### **Water Quality and Common Treatments for Private Drinking Water Systems:**

Drinking Water Standards-Primary Drinking Water Standards : Inorganics, Organics and Volatile Organic Chemicals. Secondary Drinking Water Standards-Inorganics and Physical Problems. Water Testing, Mineral Analysis, Microbiological Tests, Pesticide and Other Organic Chemical Tests. Principle involved in Water Treatment Techniques. (i) Reverse osmosis (ii) Disinfection methods such as chlorination, ultraviolet light, ozonation etc (iii) Chemical oxidation and (iv) Ion exchange (water softeners). Visit to nearby drinking water plants and interaction at sites.

**Introduction to Soil Chemistry-** Basic Concepts. Effect of pH on nutrient availability. Macronutrients and their effect on plants -Carbon, Hydrogen, Oxygen, Nitrogen and Phosphorus other macronutrients-Calcium, Magnesium and Sulfur. Micronutrients and their effect on plants. Boron ( $B_4O_7^{2-}$ ), Copper ( $Cu^{2+}$ ), Iron ( $Fe^{2+}$ ,  $Fe^{3+}$ ) Manganese ( $Mn^{2+}$ ) Molybdenum ( $MoO_4^{2-}$ ) Zinc ( $Zn^{2+}$ ) Cobalt ( $Co^{2+}$ ) Chlorine ( $Cl^-$ ) and Others. Determination of soil nitrogen by Kjeldahl method- Illustration through charts (Or) demonstration of experiment. Visit to nearby agricultural farms and interaction with farmers. Discussion with farmers on the use of Soil Analysis Kits.

#### **References**

1. A Text book for 'Remedial methods for pollution, drinking water and soil fertility standards', First Edition, Authors: Dr Mudvath Ravi, Gopu Srinivas, Putta Venkat Reddy, Vuradi Ravi Kumar, Battini Ushaiah, ISBN No. 978-93-5311-183-0.
2. Remedial methods for pollution, drinking water and soil fertility standards, Author: Dr G. Vanjatha.

3. Remedial methods for pollution, drinking water and soil fertility standards, Telugu version, Authors: Dr N. Yogi Babu, Dr. G. Vanajatha, M. Srilatha.
4. Environmental Pollution, [download.nos.org/333courseE/10.pdf](http://download.nos.org/333courseE/10.pdf)
5. CFC Replacements, [butane.chem.uiuc.edu/pshapley/Environmental/L21/3.html](http://butane.chem.uiuc.edu/pshapley/Environmental/L21/3.html)
6. Effects of Acid Rain on Buildings [www.air-quality.org.uk/12.php](http://www.air-quality.org.uk/12.php)
7. Acid Rain Effects - Buildings - Chemistry  
[chemistry.elmhurst.edu/vchembook/196buildings.html](http://chemistry.elmhurst.edu/vchembook/196buildings.html)
8. How to protect national heritage - waysto protect monuments [www.youthkiawaaz.com/2011/03/how-to-protect-national-heritage/](http://www.youthkiawaaz.com/2011/03/how-to-protect-national-heritage/).

SEMESTER- IV  
PAPER-IV(SEC-3): VERMICULTURE

Instructions: 2hr per week

No. of period: 30

No. of credits: 2

**UNIT-I:**

(15 Periods)

- 1.1 Scope of vermi technology- Vermiculture and vermi composting – difference between vermiculture and vermi composting –
- 1.2 Earthworm diversity – Ecological groups of earthworms, biology of composting earthworms – *Eoisena foetida*, *Eudrilus lugeniae*.
- 1.3 Soil – Physical, chemical and biological features
- 1.4 Organic waste sources – problems in traditional composting, vermi composting
- 1.5 Types small and large scale pit method, heap method.

**UNIT-II:**

(15 Periods)

- 2.1 Vermiculture techniques – vermi culture process – site selection - Selection and collection of species mono and poly culture
- 2.2 Essential parameters for vermi culture – bedding. Methods of harvesting worms general manual methods, self harvesting method, mechanical method
- 2.3 Nutritive value of vermi compost, storing and packing of compost
- 2.4 Applications of vermi composting in agricultural and horticultural practices
- 2.5 Economic of vermi culture, nationalized bank, NABARD support for vermi culture.

**References:**

1. Earthworm ecology by LEE
2. Biology of earthworm by Steven son
3. Vermicomposting tech – soil health to human health by Ranganathan L.S.