

Subject Title : Environmental Studies		
Sub Code : 18HS32	No of Credits: 1	No. of Hrs / Week : 2
Exam Duration : 3 Hrs.	CIE + SEE = 50 + 50 =100	Total No. of Contact Hours : 16

Objectives:

1. To create awareness among the students about impacts of developmental and human activities on natural resources, remedial measures and life support systems viz. land, water, air etc.
2. It makes how to conserve natural resources for sustainable development.
3. To understand the importance of environmental protection and sustainable development.

Unit. No	Syllabus	No of Teaching Hours
1	Introduction: Concept of environmental studies. Definition of environment, components of the environment and structure of the atmosphere. Study of different ecosystems. Human Activities And Its Effect On Environment: Agriculture, Industry, Mining, Transportation, & Urbanization.	04 hours
2	Natural Resources: Forest Resources, Water Resources, Mineral Resources, Food Resources and Land Resources ENERGY: Definition of energy and energy resources, different types of energy-conventional and non-conventional energies (Classification only).	03 hours
3	Environmental Pollution And Effects: Air pollution, Water pollution "water born and water induced disease", Soil pollution and Noise pollution. Current Environmental Issues Of Importance: Population Growth, Climate	03hours
4	ENVIRONMENTAL Episodes: Episodes (Los Angeles smog, Minamata disease in Japan 1945, Bhopal (India) gas tragedy 1984)- Brief Description Legislation to control and protect the environment, about environmental awareness. Environmental Impact Assessment And Sustainable Development.	03 hours

Text Books

1. Ranjit Daniels R.J. and Jagdish Kirshnaswamy, (2009), "Environmental Studies", Wiley India Private Ltd., New Delhi
2. Benny Joseph (2005), "Environmental Studies", Tata McGraw - Hill Publishing Company Limited
3. Rajagopalan R. (2005), "Environmental Studies – From Crisis to Cure", Oxford Univesity Press

References

1. Raman Sivakumar, (2005), "Principles of Environmental Science and Engineering", Second Edition, Thomson Learning, Singapore

2. Meenakshi P. (2006), "Elements of Environmental Science and Engineering", Prentice Hall of India Private Limited, New Delhi
3. Prakash S.M. (2007), "Environmental Studies", Elite Publishers, Mangalore
4. Erach Bharucha (2005), "Text Book of Environmental Studies", for UGC, Universities Press
5. Tyler Miller Jr. G. (2004), "Environmental Science – Working with the Earth", Tenth Edition, Thomson Brooks/Cole
6. Tyler Miller Jr. G. (2006), "Environmental Science – Working with the Earth", Eleventh Edition, Thomson Brooks/Cole
7. [www.iitg.ernet.in>rkbc>presentation](http://www.iitg.ernet.in/rkbc/presentation)
8. www.nptel.org.in
9. <http://books.google.co.in>

Course Outcomes:

- CO1. The students will be introduced and refreshed about the ecology and ecosystem in general and understand the effect of human activities on environment.
- CO2. The students will be able to analyze the importance of natural resources and its protection.
- CO3. The students will understand the value of environment protection by studying past episode.
- CO4. The students will acquire the skill to adopt the suitable method for sustainable development through environmental impact assessment and rainwater harvesting.

SOFT SKILLS -III semester

Subject Code: 18HS33	Mandatory Course	No of lecture hours per week: 2 Hrs
Exam Duration:	Exam marks: NIL	Total No. of lecture hours: 26 hrs per semester

COURSE OBJECTIVES:

1. The lessons under unit 1 is to help students to recognize oneself as an individual being aware of one's knowledge, personality, environment and lifestyle, through different base and measures like SWOC analysis, personal developments.
2. The lessons under this unit make students to understand the importance of soft skills and hard skills and how to think critically and also learn the importance of creative thinking.
3. The lessons under this unit make students to understand the importance of attitude, time, and also learn to manage them.
4. The objective of this unit is to help a student to learn the art of goal setting and being motivated in achieving his goal in spite of all the hardships with different problems along with teamwork, and leadership qualities.
5. The unit 5 aims at teaching the students about importance of handwriting, punctuation marks, spellings, which helps them, improve in writing skills.

UNIT NO	SYLLABUS CONTENT	HRS /COS
1	a. SWOC ANALYSIS b. SELF – AWARENESS AND PERSONAL DEVELOPMENT c. ETTIQUETTE AND MANNERS	5 CO1
2	d. INTRODUCTION TO SOFT SKILLS AND HARD SKILLS e. CREATIVITY f. CRITICAL THINKING	5 CO2
3	g. ATTITUDE h. ADAPTABILITY i. TIME MANAGEMENT/ PRIORITY j. STRESS MANAGEMENT	5 CO3
4	k. GOAL SETTING l. MOTIVATION m. TEAM WORK n. PROBLEM SOLVING o. LEADERSHIP	5 CO4
5	p. GUIDELINES FOR HANDWRITING q. PUNCTUATION MARKS r. SPELLING s. VISUAL NARRATIVES(Ramayana, Mahabharata, Short Stories, films and advertisements)	6 CO5

COURSE OUTCOME:

1. After the completion of this unit students will know about their self assessments and personality that how to handle various situations in a positive way.
2. At the end of this unit student will be able to see how important it is to consider things carefully and from different angles, something one sees, hears, experiences or reads in

order to understand it fully. The student will also have understood the importance of soft skills and thinking creatively.

3. After the completion of this unit students will have learnt about attitude and adaptability and also how to deal with problems and stress in the present world.
4. At the end of this unit students will have learnt some simple ways of planning to achieve his dream and also feel enthusiastic about doing something individually and as well in team.
5. After the completion of this unit students writing skills will have improved.

REFERENCE:

1. English for Job Seekers (Language and Soft Skills for the Aspiring) by Geetha Rajeevan, C.L.N. Prakash et al.) Cambridge University Press Pvt. Ltd.
2. New International Business English by Leo Jones and Richard Alexander. Cambridge University Press Pvt. Ltd.
3. Business Benchmark by Norman Whitby. Cambridge University Press pvt,Ltd
4. Grammar practice Activities (practical guide for teachers) Cambridge University Press Pvt. Ltd.

Subject Title: EMPLOYABILITY SKILLS		
Subject Code: 18HS43	Mandatory Course	No of lecture hours per week: 2 Hrs
Exam Duration:	Exam marks: NIL	Total No. of lecture hours: 26 hrs per semester

COURSE OBJECTIVE:

1. According to the present day requirement, this unit is designed on job seeking topics, adopting a task based approach with activities and worksheets.
2. In this unit students will be taught to prepare project report effectively which is integral part of their academics by making use of referencing skills. And also they will be taught how to write an abstract and will be familiarized with research paper guidelines.
3. The unit 3 aims at preparing the student to face interviews confidently.
4. Under the topics like synonyms, antonyms and homophones students' vocabulary will be enhanced.
5. The lessons under this unit help students' to use idioms and phrases, decoding the analogies and the correct usage of collective nouns

UNIT NO	SYLLABUS CONTENT	HRS/COS
1	a. Employability Skills b. PRESENTATION SKILLS c. RESUME WRITING d. COVERING LETTER e. E-MAIL WRITING	8 CO1
2	a. PROJECT REPORT b. REFERENCING SKILLS c. ABSTRACT WRITING d. RESERCH PAPER GUIDELINE AND FORMAT	2 CO2
3	e. INTERVIEW SKILLS	8 CO3
4	f. SYNONYMS g. ANTONYMS h. HOMOPHONES	4 CO4
5	i. IDIOMS & PHRASES j. ANALOGY k. COLLECTIVE NOUNS	4CO5

COURSE OUTCOME:

1. After the completion of this unit students will have learnt to make presentations both in formal and informal situations. And also will have learnt the art of resume writing.
2. After the completion of this unit student will have learnt how to do a project report using referencing skills. And also they will have learnt how to write abstract and will have been familiarized with research paper guidelines.
3. This unit will have helped student to communicate with various skills required for job interviews.
4. After the completion of this unit the students will have learnt the strategies of vocabulary.

5. After the completion of this unit student will have learnt to use idioms and phrases in everyday conversation.

REFERENCE:

- English Skills for Technical Students by British Council, Orient Black Swan.
- A course in Grammar and Composition by Geetha Nagaraj, Cambridge University Press India Pvt. Ltd.
- Communication Skills for Professionals by Nira Konar, PHI learning Pvt. Ltd.
- Enhancing English and Employability Skills by State Board of Technical Education.

V Semester IEM

Sub Title: MANAGEMENT & ENTREPRENEURSHIP		
Sub Code: 18HS51/52	No. of Credits: 3=3:0:0(L-T-P)	No. of lecture hours/week: 3
Exam Duration: 3hrs	CIE+Assignment+Group Activity+SEE =100 40+5+5+50=100	Total No. of Contact Hours: 39

Course Objectives:

1. To impart the knowledge about the Management concepts, evolution and Management functions.
2. To familiarize the student on Entrepreneurship and Entrepreneurial process.
3. To understand the role of SSI in economic development and gain an insight to funding agencies.
4. To have a clear understanding of concept of project, preparation of project & its screening.

Unit No.	Syllabus Content	No of Hours
1	<p>MANAGEMENT: Introduction- Meaning, characteristics of management, functions of Management- POSDCORB, Levels and Skills of Management, Roles of Managers Management as science or an art or profession, Development of management thought -Early management approaches (in brief)- Psychological, Bureaucratic, Scientific and Administrative theory and Human Relations Movement, Modern management approaches (in brief)- Behavioral, Systems, Quantitative, and Contingency approach</p> <p>FUNCTIONS OF MANAGEMENT-PART I: PLANNING: Types of Plans: Single use & Standing plans, Steps in Planning process. ORGANIZING: Types of organization (Line, Staff, Line & Staff, Matrix and Committee form) Departmentation (Functional, Product, Process, Territorial and Customer), MBO and MBE.</p>	08
2	<p>FUNCTIONS OF MANAGEMENT- PART II STAFFING: Sources of recruitment, Process of selection, DIRECTING: Leadership: Definition, Leadership styles- Autocratic, Democratic, Charismatic, Laissez faire and Participative, Motivation: Definition, Maslow, Herzberg & McGregor's Theory X & Y. Communication: Definition, types, communication process and barriers of communication, COORDINATION: importance, CONTROLLING: steps in controlling, REPORTING: importance, BUDGETTING: importance. <i>Case study discussion with respect to Indian context</i></p>	12

	<p>ENTREPRENEUR: Definition & Meaning, Characteristics, types of entrepreneur, Difference between Entrepreneurs, Intrapreneur & Manager, Stages in Entrepreneurial process, barriers to entrepreneurs, Role of Entrepreneurs in economic development.</p> <p>Rural entrepreneurs- Meaning & schemes.</p> <p>Women entrepreneurs- Concept, challenges, women entrepreneurship in India, Institutional support & special bank scheme.</p> <p>Family Business: Meaning, Roles & responsibility, types of family business, challenge faced by family business, reasons for failure of family business.</p> <p>Case study discussion with respect to Indian context. Activity: Profile of successful entrepreneur.</p>	10
3	<p>ENTREPRENEUR: Definition & Meaning, Characteristics, types of entrepreneur - Imitative, Innovative, Fabian and drone and Others, Intrapreneur - meaning, Difference between Entrepreneurs, Intrapreneur & Manager, Stages in Entrepreneurial process, barriers to entrepreneurs, Role of Entrepreneurs in economic development and Business Plan.</p> <p>Rural entrepreneurship- Definition, challenges & opportunities.</p> <p>Women Entrepreneurs- Definition, challenges, and Institutional support to Women Entrepreneurs in India.</p> <p>Family Business: Meaning and Definition, types of family business and reason for failure of family business.</p> <p>Corporate Social Responsibility- Meaning, definition and benefits.</p> <p>Case study discussion with respect to Indian context. Activity: Profile of successful entrepreneur and Writing Business plan</p>	12
4	<p>MSME: Definition of MSME (latest). SMALL SCALE INDUSTRY: Meaning, and definition, Characteristics, steps to start SSI, role of SSI in economic development, problems faced by SSI. Introduction to GATT, WTO & LPG, Sources of financing (brief), Forms of ownership - Sole proprietorship, Hindu Undivided Family, Partnership, and Cooperative.</p> <p>Institutional Support: Central level Institutions - NBMSME, KVIC, NSIC, SIDBI, IIB, EDI and NABARD. State level Institutions- DIC, KSFC, KIADB, TECSOK.</p> <p>STARTUP COMPANIES- Meaning and Challenges. Make in India concept and MUDRA Bank Initiative.</p> <p>Activity for students: Schemes for startup companies.</p>	10
5	<p>PREPARATION OF PROJECT:</p> <p>Project - Meaning, Classification of project, Project identification, Project selection, Project Appraisal, Project implementation. Project Report - Outline, Feasibility Study - Financial, Technical, Marketing, and Social Feasibility Study, PESTLE Analysis for Project and errors in preparation of project report.</p> <p>Activity for students: Preparation of project report</p>	

Note: Every unit will have an internal choice question for SEE.

Course Outcomes:

CO1: The students will gain domain knowledge on management concepts, evolution, management functions.

CO2: The students will be able to gain domain knowledge on Entrepreneurship, entrepreneurial process

CO3: The students will get an in-depth knowledge of entrepreneurial process & contribute to the betterment of the society.


CO4: Students will be able to identify business opportunities & design a project report.

RECOMMENDED BOOKS:

1. Entrepreneurship and Management- S Nagendra and V S Manjunath- Pearson Publication 4/e 2009.
2. Principles of Management – P C Tripathi, and P N Reddy – Tata Mac Graw Hill.
3. Entrepreneurship Development – Poornima M Charanmath Pearson Education 2nd Edition.

REFERENCE BOOKS:

1. Dynamics of Entrepreneurial Development and Management- Vasant Desai- Himalaya Publishing House. Latest edition.
1. Entrepreneurship and management- Shashik Gupta- Kalyani publishers, Latest edition.
2. Financial Management- Shashik Gupta- Kalyani publishers, Latest edition.

	APTITUDE & VERBAL ABILITY SKILLS – V semester (2020-21)		
	Subject Code: 18HS53	Mandatory Course (CGPC)	No of lecture hours per week: 2 Hrs
	Exam Duration:	Exam marks: NIL	Total No. of lecture hours: 26 hrs per semester

CDPC – Career Guidance and Placement Cell

COURSE OBJECTIVES:

1. The lessons under this unit make students to understand the extended Arithmetic concepts of Speed and Distance, Time and Work.
2. This unit covers the Mathematical concepts of Progression, Algorithms & Geometry.
3. This unit aims at teaching the Verbal Ability and it involves all grammar aspects of English verbal.
4. This unit includes the concepts of Idioms and Phrases, Critical reasoning and One word substitution.
5. This unit evolve with the concepts of Analogies, Sentence Completion and Non-verbal reasoning.

UNIT NO	SYLLABUS CONTENT	HRS /COS
1	Quantitative Aptitude -2 1. Speed and Distance 2. Time and Work 3. Average, Mixtures and Allegations	6 CO1
2	4. Logarithm 5. Progression (AP, GP & HP) 6. Geometry	6 CO2
3	Verbal Ability 1. Grammar concepts 2. Anonyms and Synonyms 3. Reading Comprehension	5 CO3
4	4. Idioms and Phrases 5. Critical Reasoning 6. One word Substitution	5 CO4
5	7. Sentence Completion 8. Analogies 9. Non- Verbal Reasoning	4 CO5

COURSE OUTCOME:

1. After the completion of this unit students will have learnt about Part 2 of Arithmetic Aptitude.
2. After this unit students will get to know about the concepts of Mathematic Algorithms, Progressions and Geometrical analytics.
3. After this unit students will have learnt about the Verbal Ability section which acts as a key score for English grammar section in online test.
4. Students will get exposure towards the verbal concepts which is added section in Online test.
5. Sentence Completion, Analogies and Non-verbal reasoning concepts are covered under this unit.

REFERENCE:

1. Quantitative aptitude for CAT by Arun Sharma, Tata McGrew Hill.
2. Quantitative aptitude for competitive exams by S.Chand, Dr. R.S. Aggarwal
3. Verbal Ability and Reading comprehension by Arun Sharma and Meenakshi Upadhyay, Tata McGrew Hill Education
4. Verbal aptitude for competitive exams by S. Chand, Dr. R.S. Aggarwal

Subject Title : PYTHON Programming		
Sub Code : 18IM36	No of Credits: 2 : 0 : 0 (LT-P)	No of lecture hours/week :2
Exam Duration : 3 Hrs.	CIE + SEE = 50 + 50 =100	Total No. of Contact Hours : 28

Objective:

1. To learn Syntax and Semantics and to create functions in Python.
2. To handle strings and files in Python.
3. To understand Lists, Dictionaries and Regular expressions in Python.
4. To implement Object oriented programming concepts in Python.
5. To implement data structure and to organize the data using Python

Unit No	Syllabus	No of Hours
1	Introduction to Python: The basic elements of Python - Data types, variables, expressions, operators, Sequence, control-flow statements, Algorithms, building blocks of algorithms. Functions, Scoping and Abstraction – Functions and scoping, Decomposition and Abstraction, Keyword Arguments, Specifications, Recursion, Modules, Inductive Reasoning, Global Variables, System Functions and Parameters. Programming examples.	8
2	Tuples and Lists: Tuples, Lists, List Operations, Mutation, Aliasing, Cloning – Dictionaries: Functions as Objects, Dictionaries. Debugging: Programming Challenges, Classes of Tests, Bugs, Debugging and Debugging Examples. Assertions and Exceptions, Assertions, Exceptions, Exception Examples	7
3	Classes and Inheritance: Why Object Oriented Programming, Classes & Objects, Classes & Methods, Abstract Data Types and Classes, Encapsulation and Information Hiding, Class Instances, Overloading, Composition, Inheritance, Programming examples.	7
4	Files and exception: text files, reading and writing files, format operator; command line arguments, errors and exceptions, handling exceptions, modules, packages; Illustrative programs: word count, copy file, programming examples.	6
5	Files and exception: text files, reading and writing files, format operator; command line arguments, errors and exceptions, handling exceptions, modules, packages; Illustrative programs: word count, copy file, programming examples.	6

Note 1:

- SEE question paper shall contain 10 questions having internal choice in each unit. □ Students shall answer one question from each unit. **Note 2:**
- Assignments are evaluated for 5 marks.
- CIE shall be evaluated for 20 marks

Course Outcome:

After learning the course, the student will be able:

1. Develop and execute algorithmic solutions to simple computational problems with python programs.
2. Decompose a Python program into functions.
3. To be able to understand the various data structures available in Python programming language and apply them in solving computational problems.
4. To be able to do testing and debugging of code written in Python.
5. Ability to Text Processing scripts.

Text Books / Reference Books:

1. Introduction to Computation and Programming using Python, by John Guttag, PHI Publisher. Revised and Expanded version.
2. Python Programming using problem solving Approach by Reema Thareja, Oxford University. Higher Education Oxford University Press; First edition.
3. Fundamentals of Python first Programs by Kenneth A Lambert, Copyrighted material Course Technology Inc. 1st edition.

Subject Title: PYTHON PROGRAMMING LAB

Sub Code : 18IML37	No of Credits : 0:0:1	No. of Hrs / Week : 2
Exam Duration : 3 Hrs.	CIE + SEE = 50 + 50 =100	Total No. of Contact Hours : 13

Course Objectives:

- To write, test, and debug simple Python programs.
- To implement Python programs with conditionals and loops.
- Use functions for structuring Python programs.
- Represent compound data using Python lists, tuples and dictionaries.
- Read and write data from/to files in Python.

		Programs List	No. of Hours
1	a	Write a program that declares 3 integers, determines and prints the largest and smallest in the group.	
	b	Write a program that accepts 'n' numbers from the user and print their sum.	
2	a	Write a program to find factorial of a given number.	
	b	Write a program to print Fibonacci Series.	
3	a	Write a program to implement linear search and binary search.	
	b	Write a program to <ul style="list-style-type: none"> • Determine whether the given string is a palindrome or not using slicing and without using slicing • Find the number of Vowels and Consonants in a given string 	
4	a	Write a program to find that given number is Armstrong or not.	
	b	Write a program to convert decimal number into binary numbers.	
5	a	Write a program for generation of pyramid. Pyramid 1 Pyramid 2 * 1 * * 1 2 * * * 1 2 3 * * * * 1 2 3 4	
	b	Write a Python program to get the largest and smallest number from a list.	
6	a	Write a function ball collide that takes two balls as parameters and computes if they are colliding. Your function should return a Boolean representing whether or not the balls are colliding.	
	b		

7	a	Write A Program that Reads a Text File and Counts the Number of Times a Certain Letter Appears in the Text File.
	b	Write A Program to Read a Text File and Print all the Numbers Present in the Text File
8	a	Write a Python script to sort (ascending and descending) a dictionary by value
	b	Create a dictionary for words and their meanings. Write functions to add a new entry (word : meaning), search for a particular word and retrieve meaning, given meaning find words with same meaning, remove an entry, display all words sorted alphabetically.
9	a	Write A Program to Find the Area of a Rectangle Using Classes
	b	Write A Program to Create a Class and Compute the Area and the Perimeter of the Circle
10		Write A Program to Append, Delete and Display Elements of a List Using Classes
11		<p>Write a Python program to simulate ATM transactions by including the following operations:</p> <p>a) Check for correctness of the ATM pin.</p> <p>b) Perform Balance, Withdraw and Deposit Operations.</p> <p>The above operations should be menu-driven and display appropriate messages after performing each of these operations.</p>