



Faculty of: **Sciences and Life Sciences**

Course: **Bachelor of Science (Chemistry)**

Semester: **I**

Subject Code: **MDC201-1C**

Subject Name: **Ecosystem and Natural Resources**

Sr. No	Category	Subject Code	Subject Name	Teaching hours/ Week			Credit hours	Credit Points	Evaluation Scheme/ Semester								Total
				Th	Tu	Pr			Theory				Tutorial / Practical				
									Continuous and Comprehensive Evaluation		End Semester Exams		Internal Assessment		End Semester Exams		
									Marks	Marks	Marks	Duration	Marks	Duration	Marks	Duration	
4	MDC	MDC201-1C	Ecosystem and natural resources	3	-	2	5	4	10	Assignment	50	2	25	1	-	-	100

AIM

- Aware students of the history of microbiology
- Acquaint the basic concept of microbiology as a subject.
- Basic concepts related to sterilization.
- Learn basic laboratory skills for handling glassware

COURSE CONTENTS

Course Outline for Theory

UNIT	COURSE CONTENT	TEACHING HOURS
I	Ecosystem: Concept of ecosystem, structure of ecosystem: inorganic aspect, organic compound, climate regimes, producer, Macro-consumer, Micro-consumer. function of ecosystem: energy cycle, food chains, diversity -interlinkage between organism, biogeochemical cycles. Evolution. producers, consumers and decomposer	12
II	Types of ecosystems: terrestrial ecosystem: types of terrestrial ecosystem (forest, grassland, tundra & desert ecosystem) aquatic ecosystem: freshwater & marine ecosystem. Ecological succession. food chain, food web and ecological pyramids.	10
III	Natural resources Introduction to natural resources, categories of natural resources: according to continual utility, origin & geographical location of natural resources.	10
IV	Natural resources and associated problems: Forest resources and associated problems :Use and over-exploitation, Deforestation, Timber extraction, Mining and its effects on forest, Dams and their effects on forests and tribal people. Water resources and associated problems: Use and overutilization of water. Floods, droughts, Conflicts over water, Dams and problems	13

<p>Mineral resource and associated problems: Use and exploitation. Environmental effects of extracting and using minerals.</p> <p>Food resources and associated problems: World food problems, Changes caused by agriculture and over-grazing, Effects of modern agriculture, Fertilizer-pesticide problems, Water logging and salinity.</p> <p>Energy resources and associated problems: Growing energy needs</p> <p>Land resources and associated problems: Land degradation, Man-induced landslides, Soil erosion and desertification</p>	
--	--

Course Outline for Practical

SR. NO	COURSE CONTENT	HOURS
1	Water Analysis: - Dissolved oxygen (DO), biochemical oxygen demand (BOD), chemical oxygen demand (COD), total dissolved (TDS), pH, turbidity, Hardness, heavy metals.	08
2	Fuel technology: - proximate analysis of fuel (coal, wood samples), calorific values of solid and liquid fuel.	07
3	Rocks and minerals: - identification of various types, forms their characteristics.	07
4	Atmosphere Analysis: - Sox, Nox, and suspended particulate matters, carbon dioxide content of a gas sample and climate change.	08

TEACHING METHODOLOGY:

- Conventional method (classroom blackboard teaching)
- ICT Techniques
- Teaching through the classroom, laboratory work
- Variety of learning styles and tools (PowerPoint presentations, audio-visual resources, e-resources, seminars, workshops, models) Teaching through laboratory work .

LEARNING OUTCOME:

- The course provide knowledge regarding conservation of environment which is very crucial in the present-day scenario.
- Obtain the knowledge about types of ecosystems.
- Understanding the natural resource and associated problem.
- To gain a knowledge about ecosystem .

ARRANGEMENT OF LECTURE DURATION AND PRACTICAL SESSION AS PER DEFINED CREDIT NUMBERS:

Units	Lecture Duration (In Hrs.)		Calculation of Credits (In Numbers)		Total Lecture Duration	Credit Calculation
	Theory	Practical	Theory	Practical	Theory+ Practical	Theory+ Practical
Unit – 1	12	8	3	1	45+30	4
Unit – 2	10	7				
Unit – 3	10	7				
Unit – 4	13	8				
TOTAL	45	30	3	1	75	4

EVALUATION

Theory Marks	Practical Marks	Total Marks
75	25	100

Reference Book

1. **Singh, D., P.K Chhoker and R.N. Pandey.** Plant, Water Analysis: A methods Manual. IARI
2. **Helmer, Richard. 1998.** Water pollution Control: A Guide to the use of water Quality Management Principles. Spon press.
3. **Ritter, William F. 2000.** Agriculture Nonpoint Source Pollution: Watershed Management and Hydrology. CRC Press.



C. U. SHAH UNIVERSITY, WADHWAN CITY.

Faculty of: **Sciences and Life Sciences**

Course: **Bachelor of Science**

Semester: **I**

Subject Code: **AEC201-1C**

Subject Name: **English and Communication Skills -I**

Sr. No	Category	Subject Code	Subject Name	Teaching hours/ Week			Credit hours	Credit Points	Evaluation Scheme/ Semester								Total
				Th	Tu	Pr			Theory				Tutorial / Practical				
									Continuous and Comprehensive Evaluation		End Semester Exams		Internal Assessment		End Semester Exams		
									Marks	Marks	Marks	Duration	Marks	Duration	Marks	Duration	
5	AEC	AEC201-C	English and communication skills -I	2	-	-	2	2	10	Assignment	25	1	-	-	-	-	50

AIM

The course 'Communication Skills' is developed and offered with the aim of fulfilling the following learning outcomes:

- Understand the different styles of communication, understand the effective speaking skills
- Understand how to write a good personal profile, and develop good writing skills.

COURSE CONTENTS

Unit-1: Parts of Speech	(6 Lectures)
Nouns, Pronouns, verbs, adverbs, adjectives, prepositions, conjunctions, interjections	
Unit-2: Auxiliaries	(4 Lectures)
Simple Auxiliaries & Modal Auxiliaries	
Unit-3: Determiners	(5 Lectures)
Articles & Quantifiers	
Unit-4: Tenses	(8 Lectures)
Past, Present, Future	
Unit-5: Communication Skills	(7 Lectures)
Meaning and process of communication	
Types of Communication	
(verbal and Non Verbal communication)	

TEACHING METHODOLOGY

- Conventional method (classroom blackboard teaching)
- ICT Techniques
- Teaching through the classroom, laboratory work
- Variety of learning styles and tools (PowerPoint presentations, audio-visual resources, e-resources, seminars, workshops, models)

ARRANGEMENT OF LECTURE DURATION AND PRACTICAL SESSION AS PER DEFINED CREDIT NUMBERS

Units	Lecture Duration (In Hrs.)		Calculation of Credits (In Numbers)		Total Lecture Duration	Credit Calculation
	Theory	Practical	Theory	Practical	Theory+ Practical	Theory+ Practical
Unit – 1	6	00	2	00	30	2
Unit – 2	4	00				
Unit – 3	5	00				
Unit – 4	8	00				
Unit – 5	7	00				
TOTAL	30	00	2	00	30	2

EVALUATION

Theory Marks	Practical Marks	Total Marks
50	00	50

REFERENCE BOOKS

1. A High School English Grammar, Wrenn & Martin, S. Chand Publications
2. An Intermediate English Grammar, Raymond Murphy, Cambridge University Press
3. Technical Communication: Principles and Practice, Meenaxi Raman and Sangeeta Sharma, Oxford Press.



Faculty of: **Sciences and Life Sciences**

Course: **Bachelor of Science**

Semester: **I**

Subject Code: **SEC201-1C**

Subject Name: **Office Automation**

Sr. No	Category	Subject Code	Subject Name	Teaching hours/ Week			Credit hours	Credit Points	Evaluation Scheme/ Semester								
				Th	Tu	Pr			Theory				Tutorial / Practical				Total
									Continuous and Comprehensive Evaluation		End Semester Exams		Internal Assessment		End Semester Exams		
									Marks	Marks	Marks	Duration	Marks	Duration	Marks	Duration	
6	SEC	SEC201-1C	Office Automation	2	-	-	2	2	10	Assignment	25	1	-	-	-	-	50

AIM

- To know basic knowledge about DOS and Windows
- The student will be able to work with MS OFFICE efficiently

COURSE CONTENTS

UNIT-1. COMPUTER and DOS:

(3 Lectures)

- An overview of hardware, Input devices and Media, Output device and Media, Main Storage, Secondary storage, DOS basic commands DIR, MD, RD, CD, COPY, REN, DEL.

UNIT-2. INTRODUCTION TO WINDOWS

(3 Lectures)

- What is Windows?
- Introduction to windows and Advance Window Versions
- Windows Basic Control
- Working With Programs
- Managing Files and Folders
- Accessories of Windows

UNIT-3. MICROSOFT WORD.

(8 Lectures)

- Creating a New Office Document
- Creating a Document Using a Wizard or Template
- Entering Text
- Turning on Paragraph marks on

Opening and Editing Documents

- Finding and Replacing Text
- Using Print Layout View, Outline View, Web Layout View

Making Documents Look Great

- Changing Font, Font Size, Boldfacing, Italicizing, Underlying, Expanding and Condensing Character spacing, Changing the Case of Text, Using special Font Effects
- Selecting Paragraphs, Using the ruler to Indent Paragraphs, Setting a Different First Line Indent, Indent Using paragraph Dialog Box, Double Spacing Paragraphs, Centering and Justifying

Paragraphs, Setting tabs, Adding Bullets to Paragraphs, Setting Tabs, Adding bullets to Paragraphs, Numbering Paragraphs

- Changing the Page size and Orientation, Changing Margins, Setting up Headers and Footers, Creating Multiple Sections, Paginating the Document, Numbering Pages, Setting up Multiple Columns, Auto Formatting a Document
- Creating A tables, Drawing a table, Entering, Aligning, Totaling Data in a Table, Turning on Borders and Shading, Converting Text to Table and vice a versa

UNIT-4. MICROSOFT EXCEL

(8 Lectures)

- Creating New Workbooks and Worksheets
- Moving within a sheet, Entering, Editing Cells, Filling an Entry Range, Auto filling a range, Entering Simple Calculations, Building a Simple Formula, Summing Columns and Rows, Sum Function, Copying Formulas, Average Functions,
- Enlarging Columns and Rows, Inserting Rows and Columns, Inserting and Deleting Cells, Moving & Copying Data, Freezing the Headings
- Building a Better Worksheet
- Enlarging Columns and Rows, Inserting Rows and Columns,
- Inserting and Deleting Cells, Moving & Copying Data, Freezing the Headings
- Making Your Worksheet Look Great
- Choosing an AutoFormat, Formatting Text, Centering a Title Above a Range, Formatting numbers, Adding Borders & Shading to Range, Applying Conditional Formatting
- From Numbers to Pictures
- All About Charts, Creating a Default Chart

UNIT-5. MICROSOFT POWERPOINT

(8 Lectures)

Creating New Presentation

- Using Auto content Wizard, Using a Design Template, Using Sample Presentation, Changing Views, Adding Slides
- Outlining the Presentation
- Creating Text Slides

Making Great Looking Presentation

- Selecting new design, Changing Color Scheme, Switching to Slide and Title Master Views, Changing the Background color and shading, Text Fonts, Header and Footer Information, Adding logo to Background, Reordering Slides, Duplicating and deleting Slides.
- Drawing shapes, lines, Adding Predefined shapes and Text boxes, Adding Shadows Showtime ! Presenting on Paper, In Person and on the Wave
- Adding Transition Effects, Adding Preset Animation, Creating Custom Animations, setting up the show, Displaying the Show.

TEACHING METHODOLOGY

- Conventional method (classroom blackboard teaching)
- ICT Techniques
- Teaching through the classroom, laboratory work
- Variety of learning styles and tools (PowerPoint presentations, audio-visual resources, e-resources, seminars, workshops, models)

LEARNING OUTCOME

The course aims at providing the students ample knowledge of computational skills which shall be of use in their academic as well as professional life

ARRANGEMENT OF LECTURE DURATION AND PRACTICAL SESSION AS PER DEFINED CREDIT NUMBERS:

Units	Lecture Duration (In Hrs.)	Calculation of Credits	Total Lecture	Credit Calculation
--------------	---------------------------------------	-----------------------------------	--------------------------	-------------------------------

			(In Numbers)		Duration	
	Theory	Practical	Theory	Practical	Theory+ Practical	Theory+ Practical
Unit – 1	03	00	2	00	03	2
Unit – 2	03	00			03	
Unit – 3	08	00			08	
Unit – 4	08	00			08	
Unit – 5	08	00			08	
TOTAL	30	00	2	00	30	2

EVALUATION

Theory Marks	Practical Marks	Total Marks
50	00	50

REFERENCE BOOKS

1. MS-OFFICE 2010 Training Guide Bps S Jain 8183334067
2. 'WORD 2000', Guy Hart Davis, BPB Publications (1999).
3. 'MS Office: Step by Step', Joyce Cox, Prentice Hall of India (2007).
4. 'Accessing and Analysing Data with MS EXCEL', Cornell, Prentice Hall of India (2007).
5. Learning Microsoft Office 2010 Khanna Books Publishing Co. (p) Ltd. Ramesh Bangia 9381068045



Faculty of: **Sciences & Life Sciences**

Course: **Bachelor of Science**

Semester: **I**

Subject Code: **IKS201-1C**

Subject Name: **INDIAN KNOWLEDGE SYSTEM**

Sr. No	Category	Subject Code	Subject Name	Teaching hours/ Week			Credit hours	Credit Points	Evaluation Scheme/ Semester								Total
				Th	Tu	Pr			Theory				Tutorial / Practical				
									Continuous and Comprehensive Evaluation		End Semester Exams		Internal Assessment		End Semester Exams		
									Marks	Marks	Marks	Duration	Marks	Duration	Marks	Duration	
7	IKS	IKS201-1C	INDIAN KNOWLEDGE SYSTEM	2	-	--	2	2	10	Assignment	25	1	--	--	--	--	50

AIM :

- To know basic knowledge about architecture of the Ancient Indian Knowledge System and to develop an overall understanding of their role and relevance to contemporary society.

COURSE CONTENTS

UNIT-1. Introduction to Indian Knowledge System (3 Lectures)

- Overview of knowledge and traditional knowledge, non-traditional knowledge
- Ancient method of procuring traditional knowledge
- Modern methods of procuring non-traditional knowledge.
- Challenges to Traditional knowledge in modern times

UNIT-2. Meaning and importance of Indian Knowledge Systems (6 Lectures)

- Meaning of knowledge systems
- Characteristics and components of knowledge systems
- Domains of Education in India: Gurukul system, paathshala, Vidhyalaya, Vishvavidhyalay.
- Indian knowledge system in modern scenario.
- Preserving Indian knowledge system in modern India.

UNIT-3. Literary scholars of Ancient India. (5 Lectures)

- Kanad, Pingala, Maharshi Vyas, Sage manu, Sage parasar, Banbhatta, Nagarjuna, Panini.

UNIT-4. Mathematical and Scientific scholars of Ancient India. (4 Lectures)

- Aryabhata, Mahaviracharya, Baudhayana, Bhaskaracharya, Varamihira, Bhramgupta

UNIT-5. Medical and Yogic Scholars. (4 Lectures)

- Charak, Susruta, Maharshi Patanjali, Dhanwantari.

UNIT-6. Development of Arts in ancient India. (4 Lectures)

- Vyakaran shastra in Ancient India, Krishi shastra in ancient india,
- Shilpshastra in ancient India, Vastu Shastra in ancient India,

- Natya Shastra in ancient India, Sangeet Shstra in ancient India.

UNIT-7. History of Indian Economic Thought

(4 Lectures)

- What is Indian Economic Thought?
- Economic thought from: Dharm Shstra, The Manusmruti, Shukraniti, Mahabharat
- Economic lessons from kautilya's Chanakya Niti.

Arrangement of lectures duration and practical session as per defined credit numbers:

Units	Lecture Duration (In Hrs.)		Calculation of Credits (In Numbers)		Total Lecture Duration	Credit Calculation
	Theory	Practical	Theory	Practical	Theory+ Practical	Theory+ Practical
Unit – 1	03	00	2	0	03	2
Unit – 2	06	00			06	
Unit – 3	05	00			05	
Unit – 4	04	00			04	
Unit – 5	04	00			04	
Unit – 6	04	00			04	
Unit – 7	04	00			04	
TOTAL	30	00	2	0	30	2

Evaluation:

Theory Marks	Practical Marks	Total Marks
50	00	50

Reference Books:

1. Indian Knowledge System-1: C. Jamnadas and Co.