

Type	Code	ENVIRONMENTAL SCIENCE	L-T-P	Credits	Marks
	AECC-1		3-1-0	3	100
Topic Objective	The objective of this course is to introduce fundamentals of Environmental and its applications in the society				
Prerequisites	Basic concepts of Environment.				
Lecture Scheme	Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on application.				

Evaluation Scheme

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	20	80	100

University Syllabus

Unit No	Topics	Hours
Unit-1	The Environment, The atmosphere, Hydrosphere, Lithosphere, Biosphere , Ecology, Ecosystem, Biochemical Cycle (Carbon and Nitrogen Cycle). Environmental pollution, Air Pollution, Water Pollution, Soil Pollution, Radiation Pollution.	10
Unit-2	Population Ecology, Individual species, Pollution, Community, Control Method of Population, Urbanization and its effect on society. Communicable and non communicable Disease.	10
Unit-3	Environmental Movements in India, Grass root movements, Role of women in environmental movement, Movements in odisha, SPCB and CPCB.	10
Unit-4	Natural Resources, Conservation of natural resources, management and conservation of wildlife protection Act 1972, Environmental Protection. Air act and water act . Natural disaster management	10
	Total (Hours)	40

Text Books:

1. **Environmental Science: Toward a Sustainable Future**" by Richard T. Wright and Dorothy F. Boorse - This book provides a comprehensive overview of environmental science, covering topics such as ecology, conservation, pollution, and sustainability.
2. **"Silent Spring" by Rachel Carson** - Although it was published in 1962, "Silent Spring" remains a seminal work in environmental literature. It explores the impacts of pesticides on the environment and is credited with sparking the modern environmental movement.
3. **"The Sixth Extinction: An Unnatural History"** by Elizabeth Kolbert - This Pulitzer Prize-winning book examines the ongoing extinction crisis facing the planet, exploring the causes and consequences of species loss due to human activity.

4. **"Ecology: Concepts and Applications" by Manuel C. Molles Jr.** - This textbook provides a solid foundation in ecological principles and their application to real-world environmental issues. It covers topics such as population dynamics, community ecology, and ecosystem management.
5. **"Cradle to Cradle: Remaking the Way We Make Things" by William McDonough and Michael Braun** - This book presents a vision for a sustainable future by rethinking the way products are designed and manufactured. It advocates for a circular economy where waste is minimized, and materials are continually reused and recycled.

Course Outcomes: *At the end of this course, the students will be able to:*

CO1	Understanding of Environmental Systems: Students should gain an understanding of the various components of environmental systems, including the atmosphere, hydrosphere, lithosphere, and biosphere, and how they interact with one another.
CO2	Knowledge of Environmental Issues: Students should be able to identify and describe key environmental issues such as climate change, pollution, loss of biodiversity, deforestation, and resource depletion. They should understand the causes and consequences of these issues
CO3	Critical Thinking and Problem-Solving Skills: Students should develop critical thinking skills to analyze complex environmental problems and propose effective solutions. This includes the ability to evaluate scientific evidence, consider ethical implications, and make informed decisions.
CO4	Awareness of Human Impact: Students should recognize the ways in which human activities impact the environment, both locally and globally. This includes understanding the social, economic, and political factors driving environmental degradation and the role of sustainability in mitigating these impacts.
CO5	Promotion of Environmental Stewardship: Students should develop a sense of responsibility and stewardship towards the environment. This involves recognizing the importance of conservation, sustainable practices, and environmental activism in protecting natural resources and ensuring the well-being of future generations.

Program Outcomes Relevant to the Course:

PO1	Interdisciplinary Knowledge: Graduates should demonstrate a deep understanding of the interdisciplinary nature of environmental science, integrating concepts from fields such as biology, chemistry, ecology, geology, sociology, and economics..
PO2	Research and Analytical Skills: Graduates should possess strong research and analytical skills, including the ability to collect and analyze data, conduct experiments, and apply scientific methods to investigate environmental issues.
PO3	Problem-Solving Abilities: Graduates should be proficient in identifying, analyzing, and solving complex environmental problems using critical thinking, creativity, and evidence-based approaches.
PO4	Communication Skills: Graduates should be able to effectively communicate scientific information to diverse audiences, including policymakers, stakeholders, and the general public, through written reports, oral presentations, and multimedia platforms.

PO5	Ethical and Sustainable Practices: Graduates should demonstrate a commitment to ethical conduct and sustainable practices in environmental management and decision-making. This includes understanding and adhering to principles of environmental ethics, social responsibility, and environmental justice.
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Type	Code	LESSON PLAN ENVIRONMENTAL SCIENCE	L-T-P	Credits	Marks
Lecture No	Unit No		3-1-2	4	70
Lecture 1	1	Introduction to Environment and its uses in daily life Ref: TB1(1.1-1.2, pg1-15); OR1			
Lecture 2	1	Elements of Environment Ref: TB1(1.1-1.2,, pg17-19); OR1			
Lecture 3	1	Environment and its elements with introduction Ref: TB1(2.1, pg19-28); OR1			
Lecture 4	1	Hydrosphere, elements of hydrosphere and how it impact the life in the world Ref: TB1(2.2, pg42-46); OR1			
Lecture 5	1	Lithosphere and its layers and questions related to lithosphere Ref: TB1(2.3-2.8, pg42-46); OR1			
Lecture 6	1	Carbon and nitrogen cycle Ref: TB1(4.1-4.6, pg68-76); OR1			
Lecture 7	1	Environmental pollution and its types and impact on the life on earth Ref: TB1(4.2-4.6, pg80-87); OR1			
Lecture 8	1	Radiation pollution and a detailed study Ref: TB1(6.1, pg131-132); OR1			
Lecture 9	1	Class test and Practice			
Lecture 10	1	Selection control structure (Switch Statement). Ref: TB1(6.3, pg145-149); OR1			
Lecture 11	2	What is population and introduction to population Ref: TB1(6.4, pg171-176); OR1			

Lecture 12	2	Population ecology- a detailed description Ref: TB1(6.5, pg178-184); OR1
Lecture 13	2	Population, Community and control methods. Types of control methods Ref: TB1(8.1 pg212-227); OR1
Lecture 14	2	An introduction to urbanization Ref: TB1(8.3, pg257-265); OR1
Lecture 15	2	Impact of urbanization on economy and society Ref: TB1(12.1, pg269-271); OR1
Lecture 16	2	Introduction to communicable and non communicable diseases Ref: TB1(12.2, pg381-391); OR1
Lecture 17	2	What are the communicable disease and their spread Ref: TB1(12.4, pg389-395); OR1
Lecture 18	2	Overall discussion on the module with important question providing Ref: TB1(10.1-10.6, pg403-416); OR1
Lecture 19	3	Introduction to Environmental movements in india Ref: TB1(10.3, pg324-333); OR1
Lecture 20	3	Chipko movement and its impact on the society Ref: TB1(10.4, pg291-293); OR1
Lecture 21	3	What is state pollution control board and its responsibilities in controlling the environmental pollution Ref: TB1(10.5 pg295-318); OR1
Lecture 22	3	Introduction and discussion about central pollution control board Ref: TB1(2.3, pg271-280); OR1
Lecture 23	4	Introduction to module 4, natural recourses Ref: TB1(10.6, pg3111-315); OR1
Lecture 24	4	Types of natural resources, renewable and non renewable recourses Ref: TB1(10.4, pg324-333); OR1
Lecture 25	4	Introduction to the environmental act in India Ref: TB1(11.1, pg347-351); OR1
Lecture 26	4	Water act, air act and pollution control act Ref: TB1(11.2, pg354-356); OR1
Lecture 27	4	Module 4 important question and doubt clearing class Ref: TB1(11.3, pg357-360); OR1
Lecture 28	4	Class test, MCQ Ref: TB1(11.4, pg359-362); OR1
Lecture 29	4	Module 4 unit test (20 Marks) Ref: TB1(11.5, pg363-369); OR1
Lecture 30	4	Revision of the whole paper, with important questions Ref: TB1(11.6, pg371-373); OR1

LESSON PLAN

Type	Code	Digital Logic	L-T-P	Credits	Marks
	CORE COURSE-1			3-1-0	4
Topic Objective	The objective of this course is to study different methods used for the simplification of Boolean functions and binary arithmetic. To design and implement combinational circuits, synchronous & asynchronous sequential circuits. Study about Semiconductor Memory Systems.				
Prerequisites	Basic analytical, logical, problem solving skills with basic knowledge and usage of computers is required for this course.				
Lecture Scheme	Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on problem solving activities.				

Evaluation Scheme

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	15	60	75

University Syllabus

Unit No	Topics	Hours
Unit-1	Character Codes, Decimal System, Binary System, Decimal to Binary Conversion, Hexadecimal Notation, Boolean Algebra, Basic Logic Functions: Electronic Logic Gates, Synthesis of Logic Functions, Minimization of Logic Expressions, Minimization using Karnaugh Maps, Synthesis with NAND and NOR Gates, Tri-State Buffers	10
Unit-2	Arithmetic: Addition and Subtraction of Signed Numbers, Addition/ Subtraction Logic Unit, Design of Fast Adders: Carry-Look ahead Addition, Multiplication of Positive Numbers, Signed Operand Multiplication: Booth Algorithm, Fast Multiplication: Bit-Pair Recoding Multipliers, Carry-Save Addition of Summands, Integer Division, Floating-Point Numbers and Operations: IEEE Standard for Floating-Point Numbers, Arithmetic Operations on Floating-Point Numbers, Guard Bits and Truncation, Implementing Floating-Point Operations.	10
Unit-3	Flip-Flops Gated Latches, Master-Slave Flip-Flops, Edge-Triggering, T Flip-Flops, JK FlipFlops. Registers and Shift Registers, Counters, Decoders, Multiplexers, Programmable Logic Devices (PLDs), Programmable Array Logic (PAL), Complex Programmable Logic Devices (CPLDs), Field-Programmable Gate Array (FPGA), Sequential Circuits, UP/ DOWN Counters, Timing Diagrams, The Finite State Machine Model, Synthesis of Finite State Machines.	10
Unit-4	Memory System: Semiconductor RAM Memories, Internal Organization of Memory Chips, Static Memories, Asynchronous DRAMS, Synchronous DRAMS, Structure of Large Memories, Memory System Considerations, RAMBUS Memory. Read-Only Memories: ROM, PROM, EPROM, EEPROM, Flash Memory, Speed, Size, and Cost of	10

	Memory. Secondary Storage: Magnetic Hard Disks, Optical Disks, Magnetic Tape Systems.	
		Total (Hours) 40

Text Books:

TB1: **Carl Hamacher, Z. Vranesic, S. Zaky**: Computer Organization, 5/e (TMH)

Reference Books:

RB1: **M. Morris Mano**: Digital Logic and Computer Design, Pearson

Online Resources:

OR1: https://onlinecourses.nptel.ac.in/noc20_cs64/

OR2: <https://studytionight.com/courses/cpp-video-tutorial/>

OR3: <https://www.geeksforgeeks.org/computer-organization-and-architecture-tutorials/> & Other google searched sites

Type	Code	LESSON PLAN Digital Logic	L-T-P	Credits	Marks
Lecture No	Unit No		3-1-0	4	75
Lecture 1	1	Topic: Introduction to digital signals, basics of number system, types of number system. Ref: RB1 (1.1); OR1			
Lecture 2	1	Topic: Decimal to Binary Conversion, Decimal to Octal and Hexadecimal Conversion. Ref: RB1 (1.2, 1.3,1.4); OR1			
Lecture 3	1	Topic: Boolean Algebra basics and theorems. Ref: RB1 (2.1, 2.2, 2.3); OR1			
Lecture 4	1	Topic: Basic Logic Functions, Logic Gates and its types. Ref: RB1 (2.4, 2.6,2.7); OR1			
Lecture 5	1	Topic: Synthesis of Logic Functions, Minimization of Logic Expressions. Ref: RB1 (2.5,3.1); OR1			
Lecture 6	1	Topic: Minimization of Logic Expressions, Minimization using Karnaugh Maps Ref: RB1 (3.1-3.3); OR1			
Lecture 7	1	Topic: , Minimization of different logic functions using Karnaugh Maps. Ref: RB1 (3.4-3.5,3.8); OR1			
Lecture 8	1	Topic: Synthesis with NAND gate. Ref: RB1 (3.6); OR1			
Lecture 9	1	Topic: Synthesis with NOR gate. Ref: RB1 (3.6,3.7); OR1			
Lecture 10	1	Topic: Character Codes, Tri-State Buffers. Ref: RB1 (3.8,3.9); OR1			
Lecture 11	2	Topic: Introduction to signed numbers, Addition of Signed Numbers. Ref: TB1 (1.4); OR1			
Lecture 12	2	Topic: Addition/ Subtraction Logic Unit, Basics of fast adder. Ref: TB1 (6.1); OR1			
Lecture 13	2	Topic: Addition of numbers using Carry-Look ahead adder.			

		Ref: TB1 (6.2); OR1
Lecture 14	2	Topic: Multiplication of Positive Numbers, basics of signed number. Ref: TB1 (6.3); OR1
Lecture 15	2	Topic: Signed Operand Multiplication: Booth Algorithm. Ref: TB1 (6.4); OR2
Lecture 16	2	Topic: Fast Multiplication: Bit-Pair Recoding Multipliers. Ref: TB1 (6.5); OR3
Lecture 17	2	Topic: Carry-Save Addition of Summands. Ref: TB1 (6.6); OR1
Lecture 18	2	Topic: Restoring Integer Division, Non restoring Integer Division. Ref: TB1 (6.6); OR1
Lecture 19	2	Topic: Floating-Point Numbers, IEEE Standard for Floating-Point Numbers single precision. Ref: TB1 (6.7); OR2
Lecture 20	2	Topic: IEEE Standard for Floating-Point Numbers double precision, Guard Bits and Truncation, Arithmetic Operations. Ref: TB1 (6.7); OR1
Lecture 21	3	Topic: Introduction to combinational circuits.MUX and its types. Ref: TB1 (A.10); OR2
Lecture 22	3	Topic: Decoders and its types. Ref: TB1 (A.9); OR3
Lecture 23	3	Topic: Basics of Programmable Logic Devices (PLDs), Programmable Array Logic (PAL). Ref: TB1 (A.11); OR3
Lecture 24	3	Topic: Concept of Complex Programmable Logic Devices (CPLDs), Field-Programmable Gate Array (FPGA). Ref: TB1 (A.11, A.12); OR1
Lecture 25	3	Topic: Introduction to sequential circuits. Introduction to latch and flip-flops. SR Flip flop Ref: TB1 (A.6); OR1
Lecture 26	3	Topic: JK Flip-flop, T Flip-Flops. Ref: TB1 (A.6); OR2
Lecture 27	3	Topic: Master-Slave Flip-Flops, Edge-Triggering. Ref: TB1 (A.6); OR1
Lecture 28	3	Topic: Basics of Counters, UP/ DOWN Counters, Timing Diagrams. Ref: TB1 (A.8,A.13); OR1
Lecture 29	3	Topic: Introduction to Registers and Shift Registers. Ref: TB1 (A.7); OR1
Lecture 30	3	Topic: Concept of Finite State Machine Model, Synthesis of Finite State Machines.. Ref: TB1 (A.13); OR1
Lecture 31	4	Topic: Basics of memory, concept of primary and secondary memory. Ref: TB1 (5.1); OR2
Lecture 32	4	Topic: Internal Organization of Memory Chips. Concept and function of Static Memories. Ref: TB1 (5.2.1); OR3
Lecture 33	4	Topic: Difference between SRAM and Asynchronous DRAMS.

		Ref: TB1 (5.2.3); OR3
Lecture 34	4	Topic: Synchronous DRAMS, Structure of Large Memories. Ref: TB1 (5.2.4, 5.2.5); OR1
Lecture 35	4	Topic: Considerations of memory system, RAMBUS Memory. Ref: TB1 (5.2.6,5.2.7); OR2
Lecture 36	4	Topic: Introduction to ROM, PROM, EPROM, EEPROM. Ref: TB1 (5.3.1-5.3.4); OR3
Lecture 37	4	Topic: Flash Memory, Comparison of Speed, Size, and Cost of Memory. Ref: TB1 (5.3.5,5.4); OR2
Lecture 38	4	Topic: Introduction to secondary memory, Magnetic Hard Disks. Ref: TB1 (5.9,5.9.1); OR1
Lecture 39	4	Topic: Concept of Optical Disks. Ref: TB1 (5.9.2); OR1
Lecture 40	4	Topic: Magnetic Tape Systems. Ref: TB1 (5.9.3); OR1

LESSON PLAN

Type	Code	Programming Using C	L-T-P	Credits	Marks
	CC-2			3-1-0	4
Topic Objective	The objective of this course is to introduce fundamentals of Object Oriented Programming in Java environment and develop a small application using java.				
Prerequisites	Basic concepts of OOP concepts.				
Lecture Scheme	Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on application.				

Evaluation Scheme

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	15	65	75

University Syllabus

Unit No	Topics	Hours
Unit-1	Introduction: Introduction to Programming Language, Introduction to C Programming, Keywords & Identifiers, Constants, Variables, Input and Output Operations, Compilation and pre-processing, Data types: Different data types, Data types qualifier, modifiers, Memory representation, size and range, Operators: Operators (Arithmetic, Relational, Logical, Bitwise, Assignment & compound assignment, Increment & Decrement, Conditional), Operator types (unary, binary, ternary). Expressions, Order of expression (Precedence and associativity) Control structures: Decision Making and Branching (Simple IF Statement, IF...ELSE Statement, Nesting IF... ELSE Statement, ELSE IF Ladder), Selection control structure (Switch Statement).	10
Unit-2	Loops: The WHILE Statement, The DO...WHILE Statement, The FOR Statement, Jumps in Loops, Array: Concept of Array, Array Declaration, types of array (one and multiple dimension), Character Arrays and Strings, Subscript and pointer representation of array, Array of Pointers, Limitation of array, Pointers: Concept of Pointer (null pointer, wild pointer, dangling pointer, generic pointer), Pointer Expressions, Accessing the Address of a Variable, Declaring Pointer Variables, Initializations of Pointer Variable, Accessing a Variable through its Pointer, Pointer arithmetic.	10
Unit-3	Storage class: Types (auto, register, static, extern), scope rules, declaration and definition. Function: Function & types (User defined function, library function) Function Definition, Declaration, Function Calls, Header file and library, Function Arguments, string handling function (strlen, strcmp, strcpy, strncpy, strcat, strstr), Function recursion, Functions Returning Pointers, Pointers to Functions, Command line arguments, Application of pointer (dynamic memory allocation).	10
Unit-4	Structure and Union: Defining, Declaring, Accessing, Initialization Structure, nested structure, self-referential structure, bit-field, Arrays of Structures, Structures and	10

	Functions, Unions, difference between structure and union, active data member, structure within union, Self-referential Structure. File: File Management in C, Defining and Opening a File, File opening modes (read, write, append), Closing a File, File operations, file and stream, Error Handling During I/O Operations, sequential and random access file, low level and high level file.	
		Total (Hours) 40

Text Books:

1. E. Balagurusamy, “Programming in ANSI C”, 4/e, (TMH)

TB1: E. Balagurusamy, “Programming in ANSI C”, 4/e, (TMH)

Reference Books:

RB1: B. Kernighan & Dennis Ritchie, “The C Programming Language”, 2/e PHI

Online Resources:

OR1: <https://www.udemy.com/course/complete-c-programming-fundamentals-with-example-projects/>

OR2: <https://www.tutorialspoint.com/cprogramming/index.htm>

OR3: <https://www.geeksforgeeks.org/c-language-set-1-introduction/>

OR4: https://www.tutorialspoint.com/ansi_c/c_introduction.htm

OR5: <https://www.sitepoint.com/fundamentals-of-c/>

Type	Code	LESSON PLAN Programming Using C	L-T-P	Credits	Marks
Lecture No	Unit No		3-1-2	4	70
Lecture 1	1	What is language? What is program? Software, programming languages, type of programming. C is what type of programming? Ref: TB1(1.1-1.2, pg1-15); OR1			
Lecture 2	1	Basic concept of C, History of C programming. Ref: TB1(1.1-1.2,, pg17-19); OR1			
Lecture 3	1	Introduction to Programming Language, Introduction to C Programming, Keywords & Identifiers Ref: TB1(2.1, pg19-28); OR1			
Lecture 4	1	Constants, Variables, Input and Output Operations, Compilation and pre-processing, , size and range, Ref: TB1(2.2, pg42-46); OR1			
Lecture 5	1	, Compilation and pre-processing, , size and range Ref: TB1(2.3-2.8, pg42-46); OR1			
Lecture 6	1	Operators: Operators (Arithmetic, Relational, Logical, Bitwise, Assignment & compound assignment, Increment & Decrement, Conditional), Operator types (unary, binary, ternary Ref: TB1(4.1-4.6, pg68-76); OR1			
Lecture 7	1	Expressions, Order of expression (Precedence and associatively Ref: TB1(4.2-4.6, pg80-87); OR1			
Lecture 8	1	Control structures: Decision Making and Branching (Simple IF Statement)			

		Ref: TB1(6.1, pg131-132); OR1
Lecture 9	1	IF...ELSE Statement, Nesting IF... ELSE Statement, ELSE IF Ladder Ref: TB1(6.2, pg138-145); OR1
Lecture 10	1	Selection control structure (Switch Statement). Ref: TB1(6.3, pg145-149); OR1
Lecture 11	2	Loops: The WHILE Statement, The DO...WHILE Statement, Ref: TB1(6.4, pg171-176); OR1
Lecture 12	2	The FOR Statement, Jumps in Loops Ref: TB1(6.5, pg178-184); OR1
Lecture 13	2	Array: Concept of Array, Array Declaration, types of array (one and multiple dimension) Ref: TB1(8.1 pg212-227); OR1
Lecture 14	2	Character Arrays and Strings, Subscript and pointer representation of array Ref: TB1(8.3, pg257-265); OR1
Lecture 15	2	Array of Pointers, Limitation of array Ref: TB1(12.1, pg269-271); OR1
Lecture 16	2	Pointers: Concept of Pointer (null pointer, wild pointer, dangling pointer, generic pointer) Ref: TB1(12.2, pg381-391); OR1
Lecture 17	2	Pointer Expressions, Accessing the Address of a Variable, Declaring Pointer Variables, Ref: TB1(12.4, pg389-395); OR1
Lecture 18	2	Initializations of Pointer Variable, Accessing a Variable through its Pointer, Pointer arithmetic. Ref: TB1(10.1-10.6, pg403-416); OR1
Lecture 19	2	Storage class: Types (auto, register, static, extern), scope rules, declaration and). Ref: TB1(10.3, pg324-333); OR1
Lecture 20	2	Function: Function & types (User defined function, library function) Function Definition, Ref: TB1(10.4, pg291-293); OR1
Lecture 21	3	Declaration, Function Calls, Header file and library, Function Arguments Ref: TB1(10.5 pg295-318); OR1
Lecture 22	3	string handling function (strlen, strcmp, strcpy, strncpy, strcat, strstr, Function recursion) Ref: TB1(2.3, pg271-280); OR1
Lecture 23	3	Functions Returning Pointers, Pointers to Functions, Command line arguments Ref: TB1(10.6, pg3111-315); OR1
Lecture 24	3	Application of pointer (dynamic memory allocation). Ref: TB1(10.4, pg324-333); OR1
Lecture 25	3	Structure and Union: Defining, Declaring, Ref: TB1(11.1, pg347-351); OR1
Lecture 26	3	Declaring, Accessing, Initialization Structure, nested structure Ref: TB1(11.2, pg354-356); OR1
Lecture 27	3	, self-referential structure, bit-field

		Ref: TB1(11.3, pg357-360); OR1
Lecture 28	3	Arrays of Structures, Structures and Functions, Unions, Ref: TB1(11.4, pg359-362); OR1
Lecture 29	3	difference between structure and union, active data member Ref: TB1(11.5, pg363-369); OR1
Lecture 30	3	active data member, structure within union, Ref: TB1(11.6, pg371-373); OR1
Lecture 31	4	,Self-referential Structure Ref: TB1(11.3, pg347-349); OR1
Lecture 32	4	File: File Management in C, Ref: TB1(13.1, pg421-423); OR1
Lecture 33	4	Defining and Opening a File, Ref: TB1(13.2, pg424-426); OR1
Lecture 34	4	File opening modes (read, write, append), Ref: TB1(13.3, pg430-436); OR1
Lecture 35	4	Closing a File, File operations, file and stream Ref: TB1(13.4, pg438-440); OR1
Lecture 36	4	Closing a File, File operations, file and stream Ref: TB1(13.3, pg442-445); OR1
Lecture 37	4	Error Handling During I/O Operations Ref: TB1(13.5, pg446-448); OR1
Lecture 38	4	sequential and random-access file Ref: TB1(13.6, pg451-456); OR1
Lecture 39	4	low level and Ref: TB1(13.5, pg454-356); OR1
Lecture 40	4	high-level file Ref: TB1(13.3, pg454-356); OR1

AType	Code	PRINCIPLE OF MANAGEMENT	L-T-P	Credits	Marks
	GE/IC-1			3-1-0	4
Topic Objective	To understand the basic principles of management. To provide a basis of understanding towards working of business organization through the process .				
Prerequisites	Student must have basic management knowledge and knowledge of business organization				
Lecture Scheme	Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on problem solving activities.				

LESSON PLAN

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	15	60	75

University Syllabus

Unit No	Topics	Hours
Unit-1	<p>Nature of Management: Meaning, Definition, it's nature purpose, importance & Functions, Management as Art, Science & Profession- Management as social System Concepts of management-Administration-Organization. Evolution of Management Thought: Contribution of F.W.Taylor, Henri Fayol ,Elton Mayo, Chester Barhard & Peter Drucker to the management thought. Various approaches to management (i.e. Schools of management thought)Indian Management Thought</p>	10
Unit-2	<p>Planning - Meaning - Need & Importance, types levels– advantages & limitations, Forecasting - Need & Techniques, Decision making - Types - Process of rational decision making & techniques of decision making, 38 Organizing - Elements of organizing & processes: Types of organizations, Delegation of authority - Need, difficulties in delegation – Decentralization, Unit-3 Functions of</p>	10
Unit-3	<p>Staffing - Meaning & Importance, Direction - Nature – Principles, Communication - Types & Importance, Motivation - Importance – theories, Leadership - Meaning - styles, qualities & functions of leaders Controlling-Need, Nature, importance, Process & Techniques, Coordination - Need, Importance.</p>	10
Unit-4	<p>Strategic Management Definition, Classes of Decisions, Levels of Decision, Strategy, Role of different Strategist, Relevance of Strategic Management and its Benefits, Strategic Management in India.</p>	10

Text Books:

1. Horold Koontz and Itinz Weibrich, Essential of Management, McGrawhills International
2. K.Aswathapa, Essential of Business Administration, Himalaya Publishing House
3. L.M.Parasad Principles & practice of management - Sultan Chand & Sons - New Delhi
4. Tripathi, Reddy, Principles of Management, Tata McGraw Hill

Online Resources:

OR1: <https://www.coursera.org/articles/management>

OR2 <https://byjus.com/commerce/management-as-an-art-science-profession/>

OR3: <https://byjus.com/commerce/planning/> OR4