



THE MADURA COLLEGE

An Autonomous Institution affiliated to Madurai Kamaraj University
Re-accredited (3rd cycle) with 'A' grade by NAAC
Vidya Nagar, T.P.K. Road, Madurai – 625 011

DEPARTMENT OF INFORMATION TECHNOLOGY

Course Outcomes mapped with POs

PROGRAMME : B.Sc. (IT)

Course Code	Course Title	CLO	Mapping of CO with PO				
			PO1	PO2	PO3	PO4	PO5
20U1TLA1	இக்கால இலக்கியம்	கவிதைகள் வெளிப்படுத்தும் மனித அன்பு, பெண்நிலைகள், மொழியின்சிறப்பு, தொழிலாளர் நிலை போன்றவற்றை அறியச் செய்தல்.	-	1	1	2	2
		கவிதைகளின் கருத்துப் பரிமாற்றம், உயர்மனிதச் செயல்பாடுகளை ஊக்குவித்து நடைமுறையில் பின்பற்றல்.	-	2	2	3	2
		கதையின் உள்ளடக்கம்,வடிவம் -மாந்தர் எண்ணம், உணர்வு, நடத்தை, சமூகப் பண்பாட்டுச் செயல்பாட்டில்- ஈடுபடுதல்.	-	3	1	-	2
		இலக்கிய வரலாற்றை நிரல்படுத்திப் படைப்பாளிகளின் அறிவுத்திறத்தில் ஈடுபடச்செய்தல்.	3	-	1	-	2
		மொழியின் சிறப்புகளைத் தொகுத்தல். படைப்புக்கத்துடன் பிழை நீக்கித் தனித்துவமாக எழுதத் தூண்டல்.	-	-	3	-	2
20U1HLA1	Hindi 1	Use of singular, plural, numbers	-	1	1	2	2
		Use of sentences and choosing the right answer	-	2	2	3	2
		Able to translate and correct the sentences	-	3	1	-	2
		Able to write answers questions from prose	3	-	1	-	2
		Able to identify directions and seasons	-	-	3	-	2
20U1SLA1	Sanskrit I	Gain basic knowledge about Devanagari Script and understand Male/ Female/ Neuter Gender Words	-	1	1	2	2
		Identify Person/Number/Tense	-	2	2	3	2
		Know to substitute word without affecting Number / Tense/ Grammar and to enhance students attitude towards good behaviour through Subhashitani (Good says)	-	3	1	-	2
		Understand the Sanskrit Literature like Vedas, Vedangas and Epic Literature	3	-	1	-	2
		Translate from Sanskrit to English in Present / Future Tense	-	-	3	-	2
20U1NEN1	English-I	Use proper Parts of Speech while framing simple sentences	-	2	3	2	-

		Express practical skills of various types of writing dialogues and comprehend content in English	-	2	3	3	-
		Use proper tense forms in sentences and Classify kinds of sentences; convert from one type to another.	-	2	2	2	-
		Fill different challans , issue cheques, fill railway form in real life contexts and prepare advertisements on their own.	-	2	2	2	-
		Appreciate a literary work for its genre and evaluating ideas. To use language skills necessary for social,academic and professional purposes	-	2	3	3	-
20U1VEN1	Value Education and Professional Ethics	Describe the various value system and its familiarity	3	-	2	2	3
		List forty virtues and eighty values	3	-	2	2	3
		Outline the foundations on value oriented moral values	3	-	2	2	3
		Focus on relevance of various religion values and its similarities	2	-	2	2	3
		Build a value system and ethics in Education, Business and Teaching	3	2	2	2	3
20U1FAC1	Discrete Mathematics	List various laws of Set theory. Apply the laws and properties to simplify the problems. Discuss the duality principle and solve the problems.	3	2	1	1	3
		Describe the representations of relations. Illustrate the usage of equivalence relations in real world problems. Outline different types of functions.	3	3	-	-	2
		Explain Mathematical induction and recurrence relations. Classify the finite order relations.	3	3	-	-	2
		Outline the operations on matrices. Solve simultaneous linear equations. Find the Eigen values and Eigen vectors.	3	1	-	-	3
		Relate Atomic and Compound statements of Logic. Identify the relationship between WFF and Tautology. Explain Lattices and its properties.	3	2	1	1	3
20U1FMC1	C Programming	Demonstrate the types of variables, Constants, data types, operators, Expressions.	3	2	1	1	3
		Examine the concept of Looping and Conditional statements for developing the code.	3	3	-	-	3
		Implement the various types of Arrays and operations related with strings.	3	2	-	-	3
		Develop the code for various types of user defined functions, the scope of visibility and lifetime of variables. Apply Structures and Unions for suitable problems.	2	2	-	-	2
		Describe about the Pointers and the impact of address of pointers used in code development. Explain the usage of File concepts in C coding.	2	2	-	-	2
20U1FMC2	Principles of Information Technology	Describe the generation of computer and digital computer systems.	3	2	1	1	3
		Explain the basics of CPU and memory and different types of storage, Input/output devices.	3	1	-	-	2
		Illustrate the computer Software and database management systems.	2	3	-	-	3
		Classify the categories of Computer Networks.	3	2	-	-	2

		Explain Multimedia applications.	2	3	1	2	3
20U1FMP1	C Programming - Lab	Outline the logic using flowchart for a given problem and develop programs using conditional and looping statements.	3	3	2	3	2
		Develop programs with implementation of arrays, functions and parameter passing techniques.	3	3	2	3	1
		Develop programs with string handling functions	3	3	1	3	1
		Construct programs with Structure and Union features.	3	3	2	3	2
		Gain skills to write file programs and perform various operations on files.	3	3	3	3	3
20U2TLA2	இடைக்கால இலக்கியமும் உரைநடையும்	சிறுநிலக்கியங்கள் குறித்த அடிப்படைக் கருத்துகளைப் பெறுவர்.	1	-	3	-	2
		பக்தி இலக்கியங்கள் வெளிப்படுத்தும் சமயம் சார்ந்த செய்திகளைப் புரிவர்.	-	-	2	-	3
		சைவ வைணவ சித்தாந்த இறை தத்துவக் கருத்துகளைத் தெரிந்து நடைமுறைப்படுத்திக்கொள்வர்.	1	-	3	1	2
		இலக்கிய வரலாறு தரும் வாழ்வியல் கருத்துகளைப் பொருத்திப் பார்க்கும் திறன் பெறுவர்.	2	1	3	1	3
		மொழியின் நுட்பங்களின் மூலமாக ஆளுமைத் திறனை வளர்த்துக் கொள்வர்.	-	-	3	1	1
20U2HLA2	Hindi 2	Write stories and draft letter	1	-	3	-	2
		Use of proverbs and phrases in communication	-	-	2	-	3
		Learning morals from great Indian leaders	1	-	3	1	2
		Writing essays with creativity	2	1	3	1	3
		Using proverbs in speech and having knowledge of days in Hindi	-	-	3	1	1
20U2SLA2	Sanskrit II	Gain basic knowledge about the origin of Sanskrit Kavya Literature	1	-	3	-	2
		Understand Sanskrit Poetic Literature and Style of Writing Poems	-	-	2	-	3
		Compare Poetic Literature with Modern Life and to classify and discuss the importance of early literature	1	-	3	1	2
		Practice creativity and demonstrate different aspects of life as portrayed in Sanskrit Literature	2	1	3	1	3
		Learn Sanskrit Bhakti Literature and Tamil Chemmozhi Literature at basic levels	-	-	3	1	1
20U2NENH2	English-II	Use linkers to compose a coherent paragraph and to examine language skills through core subjects	-	2	3	2	-
		Use singular, plural, present and past tenses. 'will' and 'going to' to engage in meaningful conversations and writing tasks	-	2	3	3	-
		Classify appropriate pronunciation for "c" as "s", "k" and "ch" and classify letters / sound "p, b, th, v, w, tion" appropriately.	-	2	2	2	-
		Demonstrate practical skills of various types of media writing and reports Use appropriate expressions, ask for favor, offer suggestions and engage in meaningful telephonic conversations	-	2	2	2	-

		Appreciate a literary work for its genre and evaluating ideas.	-	2	3	3	-
20U2EVS1	Environmental Science & Gender studies	Able to list out various ecosystems and their interactions	2	-	-	1	3
		To appreciate the nuances behind food webs and food chains	2	-	2	1	3
		Able to differentiate the importance of Hotspots and mega diversity centres.	2	3	-	1	3
		Able to identify different types of pollutions and provide solutions	2	-	-	3	3
		To analyze and identify the behavioral problems among student community with reference to gender.	2	3	-	3	3
20U2FAC2	Resource Management Techniques	List the rules for formulating LPP. Apply the rules to formulate the mathematical formulation. Find the solution for Graphical method problems. Discuss the Canonical and standard forms.	3	3	1	-	3
		Describe the steps of Computing Simplex method. Illustrate the usage of various simplex methods. Outline the duality principles and solve the problems by applying simplex methods.	3	2	-	-	1
		Explain various ways to find Initial BFS for transportation problem. Classify the various problem solving techniques in Assignment methods. Find solution for traveling salesman problem.	3	3	-	3	2
		Outline the strategies used in Games. Solve the games using graphical method and Dominance theory. Describe Arithmetic method.	3	2	1	-	2
		Discuss the network components, Construction rules. Examine the Critical path in network construction. Relate PERT and CPM	3	3	-	3	3
20U2FMC3	Object Oriented Programming with C++	Explain keywords, tokens, variables constants and datatypes. Apply different types of operators, looping concepts and conditional statements for developing the code. Describe the concepts of oops and its benefits.	3	2	2	-	1
		Develop the constructor and destructor with their types in user defined Functions.	2	1	-	-	1
		Illustrate the concepts of inheritance and its types.	2	3	-	-	2
		Discuss various I/O Formatting.	3	3	-	-	3
		Utilize Exception for handling Run-Time errors.	2	3	-	-	3
20U2FMC4	Digital Principles and Applications	Illustrate the basic idea about number systems and to learn conversion from one number system to another number system.	1	2	1	3	1
		Examine various logical expressions	1	1	1	-	1
		Analyze various data processing circuits.	1	3	2	-	2
		Explain characteristics of Clocks and Timing Circuits.	1	3	3	-	3
		Compare various sequential circuits.	1	1	3	3	2
20U2FMP2	OOPs with C++ - Lab	Construct the procedural and object oriented paradigm with concepts of streams, classes, data and objects and familiarize with the language environment.	3	2	2	-	1
		Build programs with various function related concepts.	3	1	-	-	1
		Develop code on operator overloading and constructors.	3	3	-	-	2

		Implement programs on inheritance categories, type conversions and files.	3	3	-	-	3
		Demonstrate the implementation templates and Exception Handling	3	3	-	-	3
20U2NCC1	Introduction to NCC	Understand the structure, organization of NCC and armed forces.	2	1	1	2	2
		Develop leadership qualities and general knowledge from current affairs.	2	1	1	1	2
		Involve in social service activities and act in the emergency situation.	2	1	1	2	1
		Develop qualities like character, comradeship and discipline through regular training and field work.	2	1	1	1	2
		Improve secular outlook, spirit of adventure, ethics and ideals of selfless service.	2	1	1	1	2
20U2NPN	Introduction to National Service Scheme	To understand the aims and principles of NSS , the duties and responsibilities of an NSS volunteer to the society.	2	1	2	3	3
		To know the administrative structure of NSS, its plans and its execution.	2	1	2	3	3
		To acquire leadership qualities and democratic attitudes through the participation in various social activities	2	1	2	3	3
		To aid in character building and develop qualities like comradeship and discipline through regular training and field work.	2	1	2	3	3
		To develop the spirit of humanity and ideals of selfless service.	2	1	2	3	3
20U2YRC1	Introduction to Youth Red Cross	Equip to conduct social and health awareness programmes.	2	1	1	2	3
		Making awareness regarding red cross service and social activities	2	1	1	2	3
		Encourage and to youth members and other students to contribute in red cross activities.	2	1	1	2	3
		Develop qualities like compassion, kindness and caring sense through regular training and field work.	2	1	1	2	3
		Improve kind heartedness, spirit of humanity and ideals of selfless red cross service	2	1	1	2	3
20U2PED1	History of Physical Education	Know physical education in national and international level.	2	1	1	2	2
		Understand ancient Olympics, modern Olympics, first aid and yoga	2	1	1	1	2
		Comprehend games rules and ground measurements	2	1	1	2	1
		Develop their physique in good shape through regular work outs and exercises.	2	1	1	1	2
		Realize the need of physical education.	2	1	1	1	2
20U3TLA3	காப்பிய இலக்கியமும் நாவலும்	மனித அறம், அன்பு, செய்ந்நன்றி போன்றவற்றை அறியச் செய்தல்.	-	1	1	2	2
		அற மனப்பாங்கினை ஊக்குவித்துப் பின்பற்றல்.	-	2	2	3	2
		மனித அறம், பத்தி, உதவி செய்யும் மனப்பான்மை போன்றவற்றில் ஈடுபடுதல்.	-	3	1	-	2
		காவிய ஆசிரியர்களின் படைப்புதிறனை வெளிப்படுத்த வடிவ அமைப்பினை விளக்கி ஈடுபடச் செய்தல்.	3	-	1	-	2

		படைப்பின் பல் வடிவங்களை விளக்கிப் படைப்பாக்கத்தினை வெளிக் கொணரல்.	-	-	3	-	2
20U3HLA3	Hindi 3	Identify noun, pronoun and adjective in sentences	-	1	1	2	2
		Examine how a text interacts with a reader in the reading process for meaning and interpretation	-	2	2	3	2
		Classify rhymes, beats, sound pattern in a poem	-	3	1	-	2
		Explain various aspects of storytelling in terms of plot, character and form in One Act play	3	-	1	-	2
		Write simple sentences without committing errors of spelling and grammar	-	-	3	-	2
20U3SLA3	Sanskrit III	Gain knowledge of Indian Tradition through the origin of Popular Sanskrit Tales and Fables	-	1	1	2	2
		Achieve Moral Values through Sanskrit Fables – Pancatantra	-	2	2	3	2
		Comprehend Sanskrit Poetic Literature, Style of Writing Poems and Know the deepness of Indian Sanskrit Prose Literature	-	3	1	-	2
		Understand the Sanskrit Prosody through Alankaras	3	-	1	-	2
		Learn Sanskrit Prose Literature and Style of Writing Prose	-	-	3	-	2
20U3NENH3	English-III	Discover the deviant use of English both in written and spoken forms	-	2	3	2	-
		Explain the need for reference/study skills Make/take notes systematically in an organized manner	-	2	3	3	-
		Choose language for speaking with confidence in an intelligible and acceptable manner	-	2	2	2	-
		Develop an interest for reading and read independently unfamiliar texts with comprehension	-	2	2	2	-
		Examine and analyze a genre on their own	-	2	3	3	-
20U3FSM1	Office Automation	Learn the concepts of Formatting & Enhancing Document using Microsoft Word	3	1	1	-	1
		Design and Create a Worksheet using Microsoft Excel	3	3	3	2	2
		Perform various calculation using formulae.	3	2	3	-	1
		Examine database concepts and explore the Ms-Access environment.	3	1	1	1	2
		Build a new database with related tables and to create records.	3	2	2	-	3
20U3FMC5	Data Structures and Algorithms	Describe how stacks, queues and linked structures are represented in memory and their applications.	3	2	3	3	2
		Demonstrate the representation of trees and its variants.	3	3	3	2	2
		Analyze the various applications using Graph operations.	3	2	2	1	3
		Discuss the computational efficiency of the divide and conquer algorithms for sorting and searching.	3	3	1	3	3
		Implement various applications of greedy method.	3	2	1	3	3

20U3FMP3	Data Structures and Algorithms Lab	Implement and Analyze the performance of stack, queue, single and double linked list	3	2	3	3	2
		Understand the concept of tree and its operation.	3	3	3	2	2
		Gain knowledge to differentiate various operations on graphs.	3	2	2	1	3
		Build and compare various sorting techniques.	3	3	1	3	3
		Ability to identify the appropriate data structure for given problem.	3	2	1	3	3
20U3FAC3	Financial Accounting	Describe the principles of Accounting, journal and Subsidiary Books	2	2	2	2	2
		Prepare the ledger and trail balance	2	2	2	2	2
		Prepare the Trading and Profit & Loss Account and Balance Sheet	2	3	2	2	2
		Analyse the Accounts through Accounting software	2	2	2	2	2
		Develop the voucher and display of final accounts through Accounting software	2	3	2	2	2
20U4TLA4	பண்டைய இலக்கியமும் நாடகமும்	பண்டையகால மக்களின் அகம் மற்றும் புறம் சார்ந்த வாழ்வியல் நிலைகளை அறியச்செய்தல்.	-	1	1	2	2
		தனிமனித அறம், பொது அறம் ஆகியவற்றை நீதிநூல்களின் வாயிலாக அறியச்செய்தல்.	-	2	2	3	2
		நாடகம் தொடர்புடைய சிந்தனைகள், உணர்வுகள், உள்ளடக்கம், நடை போன்றவற்றைப் புரியவைத்தல். நாடகம் நடிக்கப் பழக்குதல்.	-	3	1	-	2
		தமிழ் இலக்கிய வரலாற்றையும் பண்பாட்டையும் அறியச்செய்தல்.	3	-	1	-	2
		மொழியின் சிறப்புகளுடன், அகப்பொருள் மற்றும் புறப்பொருள்களின் திணை, துறைகளை அறியச்செய்தல்.	-	-	3	-	2
20U4HLA4	Hindi 4	Apply speak, read and write Hindi at the basic level.	-	1	1	2	2
		Identify rhyme, beats, sound pattern in a poem.	-	2	2	3	2
		Analyse novel closely, paying attention to linguistic and stylistic variations.	-	3	1	-	2
		Use language for speaking with confidence in an Acceptable manner	3	-	1	-	2
		Write simple sentences without committing errors of grammar	-	-	3	-	2
20U4SLA4	Sanskrit IV	Learn about the Origin of Indian Sanskrit Drama Literature	-	1	1	2	2
		Achieve Moral Values through Indian Sanskrit Drama Literature – Karnabharam	-	2	2	3	2
		Realize Sanskrit drama Literature, method of Writing Dramas and the depth of Indian Sanskrit Drama Literature	-	3	1	-	2
		Understand the importance and role of Sanskrit drama Literature and know great Dramatists	3	-	1	-	2
		Learn Ethical Values of Human Life through Various Authors and their Dramas	-	-	3	-	2

20U4NEN4	English-IV	Examine their own ability to improve their own competence in using the language and Show their learnt useful interpersonal soft skills.	-	2	3	2	-
		Re-state a piece of text either orally or in writing with learnt soft skills	-	2	3	3	-
		Apply their useful creative skill in writing like CVs, drafting and reading	-	2	2	2	-
		Investigate the importance of writing in academic life, analyze graphs,charts,grids and other visual supports to understand a text.	-	2	2	2	-
		Apply connecting ideas to continue discussions and apply diagrammatic information – interpretations maps, graphs, pie- charts and note-taking. Communicate with others effectively.	-	2	3	3	-
20U4FSM2	Visual Programming	Categorize the types of variables, Constants, data types, and arrays.	3	3	2	1	1
		Determine the concept of Subroutines and Functions.	3	1	-	3	1
		Classify the various types of Controls.	3	3	-	2	2
		Discuss the concept of Decision making and Looping and Toolbars.	3	2	-	2	2
		Understand the concept of Menus and MDI Forms	3	2	-	3	3
20U4FMC6	Java Programming	Categorize the types of variables, Constants, data types, operators, Expressions, Decision Making and Looping.	3	3	2	1	1
		Determine the concept of Classes and Objects, Constructors, Method Overloading, Inheritance and Interface.	3	1	-	3	2
		Classify the various types of Arrays and operations related with strings	3	3	-	2	1
		Write the code for managing I/O files, file handling and multi threaded	3	2	-	2	2
		Devise the code for Applet programming and JDBC Connectivity.	3	2	-	3	3
20U4FMP4	Java Programming Lab	Outline the logic using flowchart for a given problem and develop programs using conditional and looping statements	3	3	2	1	1
		Develop programs with implementation of classes &object, constructor, Inheritance and Interface	3	1	-	3	2
		Develop programs with Arrays, String handling functions and Packages.	3	3	-	2	1
		Construct programs with Managing I/O Files, File Handling, and Multithreaded Programming.	3	2	-	2	2
		Gain skills to write Applet Programming and JDBC Connectivity with My SQL.	3	2	-	3	3
20U4FAC4	Business Statistics	Explain the concept of statistics and its applicability of types of averages and relate with measures of dispersion.	2	2	2	2	2
		Compute correlation under various methods	2	2	2	2	2
		Prepare the regression equation X on Y and Yon X	2	3	2	2	2
		Categorize price, quantity index with time and factor reversal test and cost of living index	2	2	2	2	2
		Illustrate trend values and trend lines.	2	3	2	2	2
20U4NCC2	Field Training in NCC	Understand the geography, important world organizations and will do various drills with & without arms.	2	2	1	2	2

		Read maps and related sign systems.	2	1	1	2	1
		Comprehend the types of weapons, field crafts and battle crafts.	2	1	1	2	2
		Develop qualities like character, comradeship and discipline through regular training and field work.	2	1	1	1	2
		Improve secular outlook, spirit of adventure, ethics and ideals of selfless service.	2	1	1	1	2
20U4NPN	Community Services	To provide an opportunity to become responsible members of the society by taking part in community service.	2	2	1	3	2
		To enable students acquire life skills and knowledge, through the involvement in environmental awareness activities	2	2	1	3	2
		To understand gender difference and learn to give equal respect to members of the opposite gender, develop service spirit and participate collectively in community programmes.	2	2	1	3	2
		To develop qualities like compassion, kindness and caring sense through regular training and field work in health awareness programmes.	2	2	1	3	2
		To become responsible citizens with a sound knowledge of the Indian Constitution and Fundamental Rights and be prepared for selfless service to the community.	2	2	1	3	2
20U4YRC4	Introduction to Youth Red Cross	Equip to conduct social and health awareness programmes.	2	1	1	2	3
		Making awareness regarding red cross service and social activities	2	1	1	2	3
		Encourage and to youth members and other students to contribute in red cross activities.	2	1	1	2	3
		Develop qualities like compassion, kindness and caring sense through regular training and field work.	2	1	1	2	3
		Improve kind heartedness, spirit of humanity and ideals of selfless red cross service	2	1	1	2	3
20U4PED2	Physical Education and Games	Understand the meaning, benefits and essentials of yoga and meditation.	2	1	1	2	2
		Maintain good physical and mental health by doing exercises, yoga and by taking nutritive foods.	2	1	1	1	2
		Know the rules and regulations of games like boxing, fencing, judo, basketball, cricket, hockey.	2	1	1	2	1
		Develop their physique in good shape through regular work outs and exercises.	2	1	1	1	2
		Realize the need of physical education.	2	1	1	1	2
20U5FSM3	Web Technologies	Describe how to create a basic HTML document using HTML elements.	2	1	2	2	3
		Use tables to organize information and configure page layout.	1	1	3	2	3
		Utilize CSS, to format web pages and create style sheets that configure common color and text properties.	2	1	2	2	3
		Focus the importance of JavaScript programming concepts such as variables, functions, conditions and loops.	1	1	3	2	3

		Construct the interactive web page using JavaScript.	2	1	3	3	3
20U5FMC7	Dot Net Technologies	Demonstrate the concept of IDE, form properties and controls	2	1	2	2	3
		Utilize the concept of Variables, Data types and Programming Statements.	2	1	2	2	3
		Identify the basic elements of Menus, Events and Methods.	2	1	2	2	2
		Analyze the efficacy of Object-Oriented Programming and MDI	2	1	2	2	3
		Focus the significance of Data access with ADO.NET	2	2	2	1	3
20U5FMC8	Relational Database Management System	Describe database applications and languages. Express E-R Model.	2	2	2	1	3
		Make use of Relational Model, Keys and Relational Algebra in databases.	3	3	1	1	2
		Devise various types of Queries.	2	2	1	1	2
		Illustrate relations based on functional dependency and Normal form.	2	2	1	3	2
		Identify the Storage, File structure and the concepts of Indexing and Hashing.	3	3	2	3	3
20U5FMC9	Data Communication And Computer Network	Describe the types of Networks, Protocols and functioning of Transmission media.	3	1	1	1	1
		Identify the various error detections and corrections techniques.	3	1	2	1	2
		Analyze the functions of routing algorithms.	3	1	2	1	2
		Focus on Transport layer protocols.	3	1	2	1	2
		Apply cryptography and network security Techniques to understand confidentiality algorithms.	3	2	2	2	3
20U5FMP5	Dot Net Technologies - LAB	Demonstrate the concept of IDE and form properties and controls.	2	1	2	2	3
		Understand the concept of Variables and Data types and Programming Statements.	2	1	2	2	3
		Gain knowledge in basic elements of Menus and Structured Programming.	2	1	2	2	2
		Ability to identify the concept of Object oriented programming and MDI	2	1	2	2	3
		Implement and analyze the concept of Data access with ADO.NET	2	2	2	1	3
20U5FMP6	RDBMS – Lab	Demonstrate the DDL queries.	2	2	2	1	3
		Construct basic queries, apply Aggregate functions.	3	3	1	1	2
		Construct multiple queries and various joins.	2	2	1	1	2
		Devise procedures and functions.	2	2	1	3	2
		Devise exceptions, triggers and cursors.	3	3	2	3	3
20U5FIDC	Bio-Applications in Artificial Intelligence	Discuss the core components of Artificial Intelligence.	3	2	1	2	3
		Illustrate the basic principles and algorithms of AI to solve real time problems.	3	2	1	2	3
		Identify the searching and deep learning algorithms which more appropriate for various types of learning task in various domains.	3	3	2	2	3
		Elaborate the various aspects of drug design and docking methods	3	3	3	3	3
		Explain the importance and uses of AI in modern agriculture practices	3	3	3	3	3
20U5FME1	Computer Graphics	Apply Line generating algorithms to create 2D Images.	2	2	3	1	3
		Describe the concept of Polygons and its algorithms.	3	3	2	1	2

		Examine the Use of geometric transformations on graphics objects and their application in composite form.	2	2	3	1	2
		Organize the various clipping techniques on a multiple windowing platform.	2	3	3	1	3
		Illustrate the concept of 3D Transformations and Clippings.	3	3	3	1	3
20U5FME1	Linux Programming	Describe the fundamental concepts of a shell programming.	2	1	2	1	3
		Identify the usage of files and directory maintenance in shell programming.	2	1	1	2	3
		Illustrate the significance of process structures and signals	2	1	2	1	2
		Identify the concept of POSIX and Inter process Communication.	2	1	1	2	3
		Focus on the principles of semaphores, shared memory and socket connections & Datagrams.	2	1	2	1	3
20U5FME1	Computer Architecture	Express the Effectiveness of Registers & Micro Operations.	1	1	2	1	2
		Organize Stack, Instruction formats and Addressing Modes.	1	1	2	1	2
		Apply Parallel Processing in real time applications.	1	1	2	1	2
		Classify various Modes of Transfer and Interrupts.	1	1	2	1	2
		Focus on the significance of Memory and Multiprocessors.	1	1	2	1	2
20U6FSM4	Multimedia and its Applications	Describe about the Usage of Multimedia.	1	1	1	1	1
		Make use of Bitmaps and colors	3	1	3	1	1
		Use the Audio Editing tools in applications.	2	1	3	2	2
		Utilize Animation tools to Design effective videos.	3	2	3	2	3
		Focus with Multimedia Skills to Design simple applications.	1	3	1	3	3
20U6FMC10	Programming in PHP	Describe the Expressions, Variable, Data types and Operators.	2	2	2	1	1
		Make use of the concept of Control structures and Arrays for developing the code.	2	2	2	1	1
		Compare the concept of Functions.	1	2	1	1	2
		Develop the code with file operations and HTML Form Elements.	1	3	2	2	3
		Connect MySQL with PHP by applying the concept of Database Connectivity.	1	2	1	2	3
20U6FMC11	Operating System	Describe the basic organization of computer systems.	2	1	2	1	1
		Identify the significance of inter-process communication and scheduling.	2	3	1	3	2
		Identify the deadlock mechanism to ensure the robustness.	2	2	1	2	2
		Analyze the various Memory Management Techniques.	2	2	1	1	1
		Analyze the concepts of disk scheduling and file system interface.	2	1	3	2	3
20U6FMC12	Software Engineering	Discuss on project size, quality and productivity factors.	2	1	1	1	1
		Identify the goals and requirement, development process and planning activities.	1	2	1	2	3
		Utilize the techniques of software cost estimation, staffing level estimation and formal specification.	1	2	3	2	3
		Analyze the concept of design notations and Testing strategies.	1	3	3	2	3
		Identify the significance of Maintenance of software.	1	1	3	2	3

20U6FMP7	Programming in PHP Lab	Write the programs by implementing Variable, Constant, Data types and Operators in PHP	2	2	2	1	1
		Develop the code by making use of the concept of Arrays, Looping and Conditional statements.	2	2	2	1	1
		Devise programs using functions.	1	2	1	1	2
		Develop the code with file operations and HTML Form Elements.	1	3	2	2	3
		Connect MySQL with PHP by applying the concept of Database Connectivity.	1	2	1	2	3
20U6FME2	Python Programming	Describe the fundamentals of Python and impart the knowledge of Lists, Tuples, Set and Directories.	2	2	1	2	2
		Utilize the concepts of Control Structures and Functions to develop a Python program.	2	3	2	2	2
		Make use of Modules and Packages.	2	3	3	2	1
		Devise programs using OOPS concept.	2	3	3	2	2
		Focus on File handling and Database.	2	2	2	2	2
20U6FME2	Android Programming	Develop Android applications related to layouts and interfacing multiple activities.	2	2	1	2	2
		Demonstrate the design concepts of user interface using components, views and menus.	2	3	2	2	2
		Focus the importance of fragments.	2	3	3	2	1
		Focus the significance of SQLite database to develop Android Applications.	2	3	3	2	2
		Build interactive applications using Flutter.	2	2	2	2	2
20U6FME2	Software Testing	Describe the basic concepts and the processes of software testing.	1	1	2	2	2
		Develop test cases from the given requirements using Black box testing techniques.	2	1	2	2	3
		Identify the test cases of system, acceptance testing.	2	1	2	2	3
		Illustrate the testing strategies of performance and regression testing.	2	1	2	2	3
		Examine the test adequacy criteria to complete the testing process using testing tools.	1	-	3	3	2
20U6FME3	Data Mining	Describe the key processes of data mining and knowledge discovery process.	1	2	1	2	2
		Analyze the various methods of Classification Algorithms.	1	3	1	2	3
		Apply clustering techniques to solve problems in a mathematical way.	1	3	1	2	3
		Make use of frequent pattern and correlation techniques to solve real time problems.	1	3	1	2	3
		Compare various types of web mining techniques.	2	3	2	2	3
20U6FME3	Network Security	Describe the concept of OSI Architecture and classify the Security Models.	1	2	1	-	1
		Utilize the concept of AES, DSA, RSA algorithm in data Security	2	2	2	2	3
		Examine how the data is authenticated using Hash Function	1	2	1	2	3
		Make use of Security Protocols to enable secured Transmission.	1	1	2	2	3

		Identify various Firewall Techniques.	2	2	3	2	3
20U6FME3	Cloud Computing	Describe the characteristics and type of Clouds.	1	1	1	2	2
		Identify the significance of reference models and architecture.	2	1	2	1	2
		Focus on virtualization and storage methods.	3	2	1	2	3
		Classify various services and security methods.	1	1	2	3	3
		Collect the opportunities and applications of Cloud platform.	3	2	2	3	3


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