



DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE

(Autonomous)

College with Potential for Excellence, Linguistic Minority Institution

Affiliated to University of Madras

Arumbakkam, Chennai 600 106

1.1.3 LIST OF COURSES HAVING FOCUS ON EMPLOYABILITY/ENTREPRENEURSHIP/SKILL DEVELOPMENT DURING THE YEAR 2020-2021				
SL. NO	NAME OF THE COURSE	COURSE CODE	EMPLOYABILITY/ ENTREPRENEURSHIP / SKILL DEVELOPMENT	COURSE OUTCOME
	BA ECONOMICS (SHIFT I) - 01			
1	MICRO ECONOMICS – I	2001101	Employability, Skill Development	To evaluate and discuss the law of demand and supply
2	STATISTICS – I	2001102	Skill Development	To distinguish between the various methods of collection and representation of data.
3	ENTREPRENEURIAL DEVELOPMENT	2001103	Skill Development	To be able to conceive a business idea and prepare a project report.
4	PRINCIPLES OF MANAGEMENT	2001104	Employability	Explains the importance, features and process of planning & decision making.
5	MICRO ECONOMICS – II	2001205	Employability	To understand short run and long run production function, law returns and returns to scale.
6	STATISTICS -II	2001206	Employability, Skill Development	To outline the uses of index numbers recall formulae and solve problems on determining index numbers through different methods.
7	MARKETING	2001207	Employability, Entrepreneurship	To explain the promotional programmes and examine its effects.
8	BASIS OF CAPITAL MARKET	2001208	Employability	Analyse the role and functions of Financial Intermediaries.
9	INDIAN ECONOMIC DEVELOPMENT AND POLICY-I	1901309	Employability	Evaluate the importance of the transport sector in development
10	MONETARY ECONOMICS-I	1901310	Skill Development	To identify and evaluate the various monetary standards and systems of note issue prevalent.
11	TOURISM AND ECONOMIC DEVELOPMENT	1901311	Employability	To appraise the various policies and principles adopted with respect to tourism
12	INDIAN ECONOMIC DEVELOPMENT AND POLICY-II	1901412	Employability	Analyse the working of the Tamil Nadu Government w.r.t India
13	MONETARY ECONOMICS-II	1901413	Employability	To explain the functioning of monetary policy and evaluate its potential and burden.
14	ELEMENTS OF INSURANCE	1901414	Employability	Demonstrate comprehensive knowledge and understanding of Basic elements of Types, Principles in Insurance.
15	MACRO ECONOMICS - I	1801515	Employability, Skill Development	The student will acquire skills in the methods of calculating National Income.
16	FISCAL ECONOMICS - I	1801516	Employability	Evaluate public revenue and taxation
17	INTERNATIONAL ECONOMICS - I	1801517	Employability	To understand the concept, meaning, structure and equilibrium in the Balance of payments
18	MANAGERIAL ECONOMICS	1801519	Employability, Skill Development	Understand capital budgeting and evaluate its impact in capital structuring, investment decisions, and project profitability
19	MACRO ECONOMICS - II	1801620	Employability	To explain the concepts of multiplier, accelerator, classify its types and evaluate them
20	FISCAL ECONOMICS – II	1801621	Employability	Evaluate the role of local bodies with respect to India
21	INTERNATIONAL ECONOMICS – II	1801622	Employability	To analyze the present international monetary system.

PRINCIPAL
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22	HUMAN RESOURCE MANAGEMENT	1801624	Employability	They can able to gain ample of skills such has career planning & criteria of promotion
23	ENVIRONMENTAL ECONOMICS	1801623	Employability	To understand the impact of economic policies in society and international environment in context to sustainable development.
	B.A., ECONOMICS (SHIFT II) - 02			
24	MICRO ECONOMICS-I	2002101	Skill Development, Entrepreneurship	The students developed the skill of analyzing the various aspects of consumer behavior and short run and long run production.
25	STATISTICS - I	2002102	Skill Development	The students will be aware of various statistical tools and statistical methods
26	PRINCIPLES OF MANAGEMENT	2002103	Employability, Skill Development	The students will be aware various management principles and the course ensures employability.
27	ECONOMICS OF TOURISM	2002104	Employability, Skill Development	The course promises employability in various sectors of tourism
28	MICRO ECONOMICS-II	2002205	Employability, Entrepreneurship	The students will gain knowledge on various cost concepts and different types of market structures
29	STATISTICS - II	2002206	Employability, Skill Development	The course enhances the employment opportunities of the students through various statistical concepts.
30	ENTREPRENEURIAL DEVELOPMENT	2002207	Entrepreneurship	The students will be encouraged to transform themselves into entrepreneurs by means of various governmental and non-governmental programmes.
31	COMPUTER AND ITS APPLICATIONS	2002208	Employability	The course offers working knowledge in different domains and promises employability on the completion of the course
32	MARKETING	1902309	Employability, Skill Development	The student will be able to analyze the social economic effects of advertising
33	MONETARY ECONOMICS-I	1902310	Employability	The student will be able to assess the role of money supply in the economy.
34	FINANCIAL SERVICES	1902311	Employability, Entrepreneurship	The student will acquire the ability to analyze and interpret the working of SEBI, and online trading
35	INDIAN ECONOMY	1902412	Employability	The student will be able to evaluate the importance of the transport sector in development
36	MONETARY ECONOMICS-II	1902413	Employability	The student will be able to apprise the role of international financial institutions in the Indian context
37	ELEMENTS OF INSURANCE	1902414	Employability, Entrepreneurship	The students will be able to explain about the various forms of general insurance
38	MACRO ECONOMICS - I	1802515	Employability, Skill Development	The students will gain in-depth knowledge knowledge in different macro economic concepts and the working of the markets.
39	FISCAL ECONOMICS - I	1802516	Employability	The students will gain knowledge on different concepts of taxation and the course also ensures employability
40	INTERNATIONAL ECONOMICS - I	1802517	Skill Development, Entrepreneurship	The students will gain in-depth knowledge on various concepts of foreign trade
41	HUMAN RESOURCE MANAGEMENT	1802518	Employability, Skill Development	The students will gain knowledge on various practical concepts on job selection and recruitment.
42	INCOME TAX	1802519	Employability, Skill Development	The students will be well aware of various tax related concepts and enables them to attempt various competitive exams



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43	MACRO ECONOMICS - II	1802620	Employability, Entrepreneurship	The students will gain in-depth knowledge knowledge in different macro economic concepts and the working of the markets.
44	FISCAL ECONOMICS- II	1802621	Employability	The students will gain knowledge on different concepts on the working of the economy and the course also ensures employability at an administrative level
45	INTERNATIONAL ECONOMICS - II	1802622	Employability, Entrepreneurship	The course educates the students on various international financial agencies and their working and enhances their job opportunities
46	ENTREPRENEURIAL DEVELOPMENT	1802623	Entrepreneurship	The students will be aware of various financial agencies and also encourages entrepreneurship amongst the students.
47	MANAGEMENT ACCOUNTING	1802624	Employability	The students will learn various management accounting concepts and promises employability at various accounting fi
BBA - 03				
48	ACCOUNTING FOR MANAGERS –I	2003101	Employability	<ul style="list-style-type: none"> •Prepare Journal, ledger, trial balance and cash book •Prepare final accounts with adjustments •Classify errors and making rectification entries •Pass depreciation entries and prepare depreciation accounts •Prepare single and double entry system of accounting.
49	PRINCIPLES OF MANAGEMENT	2003102	Employability	<ul style="list-style-type: none"> • Describe nature, scope, role, levels, functions and approaches of management • Apply planning and decision making in management • Identify types of organization and its structure • Analyse appropriate recruitment and training practices in organization. • Explain co-ordination and control mechanisms in organisation
50	CONSUMER BEHAVIOUR	2003104	Employability	<ul style="list-style-type: none"> •Describe concepts underlying consumer behavior and relate consumer involvement & decision making. •Identify & outline the significance of motivation & personality with consumer behavior •Identify & outline the significance of Attitude, Culture with consumer behavior.
51	ACCOUNTING FOR MANAGERS –II	2003205	Employability	<ul style="list-style-type: none"> •Interpret cost sheet & write comments •Compare cost, management & financial accounting •Calculate fund flow and cash flow statements •Evaluate marginal costing and its components •Analyse the various ratio and compare it with standards to assess deviations
52	E - COMMERCE	2003208	Employability	<ul style="list-style-type: none"> • Outline e-commerce framework and its related terminologies. • Understand planning and implementation of e-commerce business • Discuss fundamental concepts underlying e-commerce.



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53	BUSINESS COMMUNICATION	2003206	Skill Development	<ul style="list-style-type: none"> • Understand communication process and its barriers • Identify non-verbal communication • Develop oral communication skills & conducting interviews • Use managerial writing for business communication • Identify usage of modern communication tools & its significance for managers
54	FINANCIAL MANAGEMENT	1903309	Employability	<ul style="list-style-type: none"> • Understand the importance of finance and its source to operate the business • Analyse the structure of capital and determine the debt and equity portion in business • Know the cost incurred to the company to raise capital through long term sources • Analyse ARR, IRR, NPV and PI • Understand the concept of working capital and its importance in administration of finance in business.
55	MARKETING MANAGEMENT	1903310	Employability	<ul style="list-style-type: none"> • Understand the fundamental concepts of marketing and apply 4P's of marketing • Apply and demonstrate the 4P's of marketing. • Apply and demonstrate STP in marketing. • Outline the concepts of buyer behavior, sales management techniques and sales forecasting method
56	HUMAN RESOURCE MANAGEMENT	1903312	Employability	<ul style="list-style-type: none"> • Understand basic concepts and importance of human resource management • Provide insights on HR planning, recruitment, selection procedures in organization • Identify remuneration and its components • Understand role of trade union and dispute solving mechanisms • Describe HR Audit, E-HRM and identify other recent trends in HRM.
57	ADVERTISING MANAGEMENT AND SALES PROMOTION	1903416	Employability	<ul style="list-style-type: none"> • Discuss advertising concepts & its implications • Demonstrate concepts & terminology in developing advertising copy • Analyse & select different types of advertising media • Explain & evaluate advertising agency, budget and its effectiveness • Identify and classify sales promotion techniques – its implementation
58	BUSINESS STATISTICS	1903415	Employability	<ul style="list-style-type: none"> • Define different types of data for decision making • Analyse the measures of central tendency • Describe the statistics to solve business problems • Discuss various types of data to solve corporate problems



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59	BUSINESS TAXATION	1703518	Entrepreneurship	<ul style="list-style-type: none">• Explain tax system in India• Outline Income Tax Act 1961 inclusive underlying concepts & definitions• Outline Customs Act 1961 inclusive Types (Goods & Custom duty) & procedure.• Discuss procedures involved in GST Registration and its issues• Outline Tax audit and relevant taxation procedure
60	LEGAL ASPECTS OF BUSINESS	1803519	Entrepreneurship	<ul style="list-style-type: none">• Outline companies Act and discuss incorporation of companies• Understand contract act and its legal implications• Identify different types of contract• Outline sale of goods acts and discuss its legal framework
61	ENTREPRENEURIAL DEVELOPMENT	1803520	Entrepreneurship	<ul style="list-style-type: none">• Outline concepts, factors, functions, classification of entrepreneurship• Identify funding sources for entrepreneurship• Identify business idea generation techniques and outline project report writing• Discuss EDP and its functions• Relate Economic growth and entrepreneurial development
62	SERVICES MARKETING	1803521	Employability	<ul style="list-style-type: none">• Understand the concepts of service and growth of service sector.• Apply the 7P's of service marketing.• Understand service design and effective management of service marketing.• Explain the service quality gaps.• Demonstrate service marketing with specific sectors.
63	ORGANIZATION PSYCHOLOGY	1803312	Entrepreneurship	<ul style="list-style-type: none">• Describe role of organization behavior• Explain Motivation, its techniques and employee morale.• Outline work environment and leadership theories• Understand group dynamics• Outline organization culture, climate and counseling
64	BUSINESS ETHICS AND VALUES	1803623	Entrepreneurship	<ul style="list-style-type: none">• Understand significance of ethics & values in business and outline role of CEO in business• Analyse types of ethical issues in business environment• Identify and relate internal ethics to business environment• Identify and relate external ethics to business environment and outline social audit• Discuss corporate social responsibility



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65	PERSONALITY DEVELOPMENT	1803624	Skill Development	<ul style="list-style-type: none"> •Outline the pattern of thoughts, feelings and behavior •Enhance communication •Identify their personality •Balance EQ/IQ levels •Transform adolescence to adult stage
B.COM BANK MANAGEMENT - 04				
66	PRINCIPLES OF FINANCIAL ACCOUNTING	2004101	Employability,Entrepreneurship, Skill Development	Enable learners to get theoretical and practical exposure in the financial accounting which develop the skill enhancement of students
67	BUSINESS MANAGEMENT	2004102	Employability,Entrepreneurship, Skill Development	Enhances the capability of decision making at personal and professional levels. – Makes students industry ready and develop various managerial and accounting skills for better professional opportunities
68	NME- BASICS OF BANKING AND INSURANCE I	2004104	Employability,Entrepreneurship, Skill Development	Thus, after completing their graduation learners develop a thorough understanding of the fundamentals in banking and insurance area.
69	ADVANCED FINANCIAL ACCOUNTING	2004205	Employability,Entrepreneurship, Skill Development	Enable learners to get theoretical and practical exposure in the financial accounting which develop the skill enhancement of students
70	THEORY OF MONEY AND BANKING	2004206	Employability,Entrepreneurship, Skill Development	The graduation learners develop a thorough understanding of the fundamentals in banking and insurance area.
71	NME-BASICS OF BANKING AND INSURANCE -II	2004207	Employability,Entrepreneurship, Skill Development	Thus, after completing their graduation learners develop a thorough understanding of the fundamentals in banking and insurance area.
72	CORPORATE ACCOUNTING AND BANK AUDIT	1904309	Employability,Entrepreneurship, Skill Development	Enables learners to get theoretical and practical exposure in the corporate accounting and bank audit which develop the skill enhancement of students
73	LEGAL SYSTEM IN BUSINESS	1904310	Employability,Entrepreneurship, Skill Development	Enhances the capability of decision making at personal and professional levels. – Makes students industry ready and develop various managerial skill in legal business and skills for better professional opportunities.
74	BANKING THEORY LAW AND PRACTICE	1904311	Employability,Entrepreneurship, Skill Development	The graduation learners develop a thorough understanding of the fundamentals in banking and insurance area.
75	ENTREPRENEURIAL DEVELOPMENT	1904312	Employability,Entrepreneurship, Skill Development	Enhances the Entrepreneurial abilities of the students and develops creativity for better functioning of the organisation and Familiarizes students with business planning in different types of entrepreneurs and the evolving concepts of entrepreneurial ship.
76	COMPUTER APPLICATION IN BUSINESS	1804313	Employability,Entrepreneurship, Skill Development	Familiarizes students of E-Commerce infrastructure and the use of it in today's Digital age. • Gives knowledge of programming platform to students by use of VB scripting language • Enhances the use of Excel office productivity tools.
77	ADVANCED CORPORATE ACCOUNTING	1904414	Employability,Entrepreneurship, Skill Development	Enables learners to get theoretical and practical exposure in the advanced corporate accounting which develop the skill enhancement of students
78	FINANCIAL SERVICES AND BANCASSURANCE	1904415	Employability,Entrepreneurship, Skill Development	The graduation learners develop a thorough understanding of the fundamentals in financial services and bancassurance.
79	PRINCIPLES OF INSURANCE	1904416	Employability,Entrepreneurship, Skill Development	The graduation learners develop a thorough understanding of the principles of insurance



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80	BANKING ADVANCES	1904417	Employability,Entrepreneurship, Skill Development	The graduation learners develop a thorough understanding of the advancement in banking sector
81	PRINCIPLES OF HUMAN RESOURCE MANAGEMENT	1904418	Employability,Entrepreneurship, Skill Development	On Successful completion of the course the student will be able to enhance the capability of decision making at personal and professional levels and also it makes students industry ready and develop various managerial and accounting skills for better professional opportunities.
82	ENVIRONMENTAL STUDIES	1913412	Employability,Entrepreneurship, Skill Development	On Successful completion of the course the student will be able to aware about waste management. And Exposes learners to the impact of Industrial development
83	MANAGEMENT ACCOUNTING	1804519	Employability,Entrepreneurship, Skill Development	Enables learners to get theoretical and practical exposure in the management accounting which develop the skill enhancement of students
84	INDIRECT TAXES	1804520	Employability,Entrepreneurship, Skill Development	On successful completion of the course the student will able to understand in-depth study on the various provisions of Indirect Tax
85	MARKETING	1804521	Employability,Entrepreneurship, Skill Development	The students gain knowledge about the promotion strategy and marketing skills
86	INVESTMENT MANAGEMENT	1804522	Employability,Entrepreneurship, Skill Development	Enhances the capability of decision making at personal and professional levels. – Makes students industry ready and develop various managerial and accounting skills for better professional opportunities.
87	VISUAL BASIC	1804523	Employability,Entrepreneurship, Skill Development	The students gain knowledge about the Payroll Processing and Inventory processing
88	COST ACCOUNTING	1804624	Employability,Entrepreneurship, Skill Development	Enables learners to get theoretical and practical exposure in the cost accounting which develop the skill enhancement of students
89	CUSTOMER RELATIONSHIP MANAGEMENT	1804625	Employability,Entrepreneurship, Skill Development	Enhances the capability of decision making at personal and professional levels. – Makes students industry ready and develop various managerial and skills for better professional opportunities in CRM
90	BANKING TECHNOLOGY AND PERSONALITY SKILLS	1804626	Employability,Entrepreneurship, Skill Development	The graduation learners develop a thorough understanding in various technology updating in Banking sector
91	MARKETING OF BANKING SERVICES	1804627	Employability,Entrepreneurship, Skill Development	On successful completion of the course students will able to understand the banking industry and develop various managerial and skills for better professional opportunities in Banking sector
92	INCOME TAX LAW AND PRACTICE	1804628	Employability,Entrepreneurship, Skill Development	On successful completion of the course the student will able to understand in-depth study on the Income Tax Provisions
	B.COM GENERAL - 05			
93	FINANCIAL ACCOUNTING I	2005101	Skill Development	To impart basic accounting knowledge as applicable to business.
94	BUSINESS ECONOMICS	2005102	Employability	To acquaint the students with the economic principles applicable to business.
95	BUSINESS MATHEMATICS - I	2008104	Skill Development	To impart basic knowledge on the application of mathematical techniques for decision making in business
96	NME - BASICS OF BANKING	2005103	Employability	To provide basic understanding on the various everyday banking practices to an individual
97	FINANCIAL ACCOUNTING II	2005205	Skill Development	To impart knowledge on accounting and further focus on the accounting procedures applicable to various forms of business



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98	BUSINESS LAWS	2005206	Employability	To provide an understanding of legal environment in which business is conducted.
99	BUSINESS MATHEMATICS - II	2008211	Skill Development	To understand the fundamentals of Business Mathematics and its application in business.
100	NME – PERSONAL INVESTMENT PLANNING	2005207	Employability	To gain insights on the various investment methods
101	CORPORATE ACCOUNTING I	1905309	Skill Development	To impart knowledge on accounting procedures and standards of Corporate Houses.
102	BANKING THEORY, LAW AND PRACTICE	1805310	Employability	To provide an understanding of legal environment in which business is conducted.
103	PRINCIPLES OF MANAGEMENT	1905311	Employability	To impart knowledge on the conceptual framework of business management.
104	BUSINESS COMMUNICATION	1905312	Employability	To develop effective business communication skills among students
105	BUSINESS STATISTICS & O.R - I	1908322	Skill Development	To gain insights on the application of statistics in business operations
106	CORPORATE ACCOUNTING II	1905413	Skill Development	To enable the students to understand the concept of accounting applicable to certain specific types companies.
107	COMPANY LAW	1905414	Employability	To enable the students to understand the legal environment of the corporate.
108	FINANCIAL SERVICES	1905415	Employability	To provide insights on the role of financial services in the development of the capital market and the economy of the country
109	PRINCIPLES OF MARKETING	1905416	Employability	To acquaint the students about the marketing framework as a means of meeting the needs of customers.
110	BUSINESS STATISTICS & O.R - II	1908427	Skill Development	To gain insights on the application of statistics in business operations.
111	ENVIRONMENTAL STUDIES	19013412	Skill Development	To sensitize students on the issues facing threat to the environment and making them responsible citizens.
112	COST ACCOUNTING	1805517	Skill Development	To explain the basic concepts and the tools used in cost accounting.
113	PRINCIPLES OF FINANCIAL MANAGEMENT	1805519	Skill Development	To explain how finance constitutes the core of any company and emphasize on management of funds



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114	PRACTICAL AUDITING	1805520	Employability	To enlighten the students on the various aspects of audit of business accounts.
115	HUMAN RESOURCES MANAGEMENT	1805623	Employability	To examine the various HR practices and techniques.
116	INCOME TAX LAW & PRACTICE I	1805521	Employability	To provide sound knowledge of the important provisions of the Income Tax and their application in solving problems on computation of income of an individual under various heads of income.
117	MANAGEMENT ACCOUNTING	1805622	Skill Development	To provide an understanding of the application of accounting techniques for management.
118	ENTREPRENEURIAL DEVELOPMENT	1805624	Entrepreneurship	To enable students in understanding the issues pertaining to setting up and running of business.
119	COMPANY LAW	1805623	Employability	To enable the students to understand the legal environment of the corporate.
120	INCOME TAX LAW & PRACTICE II	1805625	Employability, Entrepreneurship	To provide sound knowledge of the important provisions of the Income Tax and their application in solving problems on computation of income.
121	INDIRECT TAXES	1805626	Entrepreneurship	To provide basic knowledge of the important provisions of the Indirect Taxes.
	B.COM CORPORATE SECRETARYSHIP - 06			
122	FINANCIAL ACCOUNTING-I	2006101	Employability / Skill Development	At the end of the course the student will acquire the skill on classifying the errors and calculating the various methods depreciation and student will also increase his knowledge on Average due date, preparation of final accounts and single entry system through which he can seek employability.
123	BUSINESS MANAGEMENT	2006102	Entrepreneurship	At the end of the course the student will be able to develop the knowledge on basics of Company, formation of a company, Prospectus share capital and members of the Company through which the student can seek employability
124	PRINCIPLES OF MARKETING	2006103	Employability	At the end of the course the student will be able to understand the concept of Marketing, Market Environment and why the market has to be segmented and various ways of distributing the products and due to this the student will learn the behavior of the consumer by this he may seek employability
125	NON MAJOR ELECTIVE – I EVERYDAY BANKING	2006104	Skill Development	At the end of the course the student will be able to understand the basic concepts of Banking and its relevance to online banking through day to day basis
126	FINANCIAL ACCOUNTING II	2006205	Employability	At the end of the course the student will understand the accounting procedure for different kinds of business like branch, Royalty, Hire purchase Etc.
127	HUMAN RESOURCE MANAGEMENT	2006206	Skill Development	To familiarize students with various techniques in HRM that contributes to the overall effectiveness of the organization, to bring to the attention of the student the latest trends in managing human resources in an organization
128	BUSINESS COMMUNICATION	2006207	Skill Development	At the end of the programme the student will get exposure to business writing, preparation of reports and presentation.



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129	NON MAJOR ELECTIVE – II FUNDAMENTALS OF INSURANCE	2006208	Employability	At the end of the course the student will be able to explore his knowledge about various insurance practices with different insurance companies
130	CORPORATE ACCOUNTING	1906309	Employability / Skill Development / Entrepreneurship	To familiarize students with the accounting treatment for issue of shares and debentures to run the company with the long term sources of fund, to Enable the students to prepare financial statements of joint stock companies, to understand the procedure for valuing the good will and shares of companies to acquire a business
131	COMPANY LAW & SECRETARIAL PRACTICE I	1906310	Employability / Skill Development / Entrepreneurship	At the end of the course the student will be able to understand the regulation of registered companies and to provide thorough understanding of the various provisions of the Indian Company law, to provide conceptual understanding of the cases of the company law
132	STATISTICS - I	1906311	Skill Development	To introduce basic concepts of Statistics, to provide statistical techniques for business data analysis
133	CORPORATE FINANCIAL REPORTING	1906412	Skill Development	To enable the student to analyze the financial statement, to understand advanced concepts in accounting and finance to understand the accounting procedure for amalgamation of companies in the nature of merger or purchase
134	COMPANY LAW AND SECRETARIAL PRACTICE - II	1906413	Employability / Skill Development / Entrepreneurship	To enable the students to appreciate the contribution made by management thinkers towards the basic principles and functions of Management, to provide opportunities apply the general functions of management in day to day managerial practice
135	STATISTICS - II	1906414	Skill Development	The student will be able to understand the Statistical techniques for business data analysis
136	COST ACCOUNTING	1806515	Employability / Skill Development	To familiarize the students and the importance of cost ascertainment, reduction and control, to develop the skills needed to apply costing techniques for each element of cost, to help students to understand the procedures to calculate the cost of the product and services
137	BANKING, THEORY, LAW & PRACTICE	1806516	Employability / Skill Development	To expose the students to various concepts Indian banking system, to make the students understand the provision of the banking regulation act 1949
138	INCOME TAX LAW AND PRACTICE I	1806517	Skill Development	To familiarize the students with the basic concepts of Income tax, to enable the student to compute income from salaries, house properties and business or profession
139	COMMERCIAL LAW	1806518	Entrepreneurship	To assist the students to learn the elements of general contract, to enable the students to understand and deal with various contract in his/her day to day life be it for business or profession, to enable the students to learn and understand the special contracts
140	ENTREPRENEURIAL DEVELOPMENT	1806519	Entrepreneurship	To familiarize the students with the requisites needed for being a successful entrepreneur, to identify the stages involved in the setting of small business unit and to motivate the student to start self-employment
141	MANAGEMENT ACCOUNTING	1806620	Employability / Skill Development	To understand and analyze financial statement to help in managerial decision making, to prepare statements like cash flow and fund flow, budget etc so as to assist the management to take meaningful and correct decision



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142	INDUSTRIAL LAWS	1806621	Employability	To familiarize the students with various labor legislations, to expose the students' legislations relating to welfare of worker
143	INCOME TAX LAW & PRACTICE II	1806622	Skill Development	To enable a student to understand the remaining part of different heads of income, to enable a student to find taxable income
144	GOODS AND SERVICE TAX & CUSTOMS LAW	1806623	Skill Development / Entrepreneurship	To enable a student to examine the provisions of GST laws for tax planning, student will relate to the impact of GST on the business sector
	BCA - 07			
145	FUNDAMENTALS OF DIGITAL ELECTRONICS	2007101	Employability, Skill Development	1. Express basic concepts and logic circuits. 2. Capable to design different types of digital logic circuit.
146	PROBLEM SOLVING TECHNIQUES	2007102	Employability, Skill Development	1. Distinguish Relevant and Non-Relevant data 2. Recognize Explicit and Tacit assumptions 3. Explore new Possibilities
147	INTROUCTION TO C++ PROGRAMMING	2007205	Employability, Skill Development	1. Understand the difference between the top-down and bottom-up approach 2. Apply the concepts of object-oriented programming 3. Illustrate the process of data file manipulations using C++
148	MICROPROCESSOR AND ITS APPLICATIONS	2007206	Employability, Skill Development	1.1. Understand the architecture of 8085 and 8086. 2. Impart the knowledge about the instruction set. 3. Understand the basic idea about the data transfer schemes and its applications
149	JAVA PROGRAMMING	1907309	Employability, Skill Development	1. Use an integrated development environment to write, compile, run, and test simple object-oriented java programs. 2. Read and make elementary modifications to Java programs that solve real-world problems. 3. Be able to create an application using string concept. 4. Be able to create a program using files in application. 5. Be able to create an Applet to create an application. 6. Identify and fix defects and common security issues in code.
150	GRAPHICS AND MUTIMEDIA	1907311	Employability, Skill Development	1. To introduce the use of the components of a graphics system and become familiar with building approach of graphics system components and Algorithms. 2. Ability to understand how the choice of data structures and the algorithm design methods impact the performance. 3. Apply the concepts multimedia in various circumstances
151	PYTHON PROGRAMMING	1907414	Employability, Skill Development	1. Be able to design and program Python applications. 2. Be able to create loops and decision statements in Python. 3. Be able to work with functions and pass arguments in Python. 4. Be able to build and package Python modules for reusability. 5. Be able to read and write files in Python



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152	SOFTWARE ENGINEERING	1907416	Employability, Skill Development	<p>1.To introduce the students to a branch of study associated with the development of a software product.2.To gain basic knowledge about the pre-requisites for planning a software project.</p> <p>3.To gain knowledge about the project scheduling concept in software engineering.</p> <p>4.To learn how to design of software.</p> <p>5.To enable the students to perform testing of a software</p>
153	COMPUTER NETWORK	1807520	Employability, Skill Development	<p>1. To develop an understanding of modern network architectures from a design and performance perspective. 2.To introduce the student to the major concepts involved in wide-area networks (WANs), local area networks (LANs) and Wireless LANs (WLANs).</p> <p>3.To clarify network terminology.</p> <p>4.To provide an opportunity to do network programming using TCP/IP.</p> <p>5.To give the students experience working in programming teams.</p> <p>6.To provide a WLAN measurement experience.</p> <p>7.To expose students to emerging technologies and their potential impact.</p>
154	ELECTIVE I SOFRWARE ENGINEERING	1807522	Employability, Skill Development	<p>1.To introduce the students to a branch of study associated with the development of a software product.2.To gain basic knowledge about the pre-requisites for planning a software project.</p> <p>3.To gain knowledge about the project scheduling concept in software engineering.</p> <p>4.To learn how to design of software.</p> <p>5.To enable the students to perform testing of a software</p>
155	ELECTIVE 1 OBJECT ORIENTED ANALYSIS AND DESIGN	1807522	Employability, Skill Development	<p>1.Discuss and elaborate the concept of OOAD. 2.Describe the object-oriented approach to system development, modeling objects, relationships and interactions.</p> <p>3. Use the class design for creating software</p> <p>4.Use case studies of object orientation on testing for software development</p>
156	.NET PROGRAMMING	1807625	Employability, Skill Development	<p>1.Set up a programming concept using the basic knowledge of HTML2.To learn the data types, different controls in VB.NET</p> <p>3.Creating ASP.Net applications using standard .net controls to develop a data driven web application for connecting to data sources and managing them.4.To maintain session and controls related information for user used in multi-user web applications.5.To Understand the fundamentals of developing modular application by using object oriented methodologies6.Course outcome s: At the end of course, the student will be able</p>



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157	MOBILE APPLICATION DEVELOPMENT	1807626	Employability, Skill Development,&	1.Develop in-depth Knowledge about the architecture and features of Android. 2.Implementing the various options available in views.3.Understand the file handling concepts and thereby enabling to manage data efficiently4. Able to describe clearly the features of SMS messaging. 5.Illustrate the concepts of Location Based Services.
158	Elective - II E- Commerce	1807628	Employability, Skill Development, & Entrepreneurship	1.Understanding of the foundations and importance of E-commerce.2.Understanding of retailing in E-commerce by in terms of branding and pricing strategies and determining the effectiveness of market research3.Implement the impact of E-commerce on business models and strategy4.Assess the Internet trading relationships including Business to Consumer, Business- to-Business, Intra-organizational.5.Knowing key features of Internet, Intranets and Extranets and how they relate to each other.6.Understanding legal issues and privacy in E-Commerce7. Assess electronic payment systems8.Recognize and discuss global E-commerce issues
159	ELECTIVE 2 OPERATION RESEARCH	1807628	Employability, Skill Development	1.To get in-depth Knowledge about the evolution of operations research and its Features.2. Understand the characteristics of OR 3.How to apply OR in industry 4.Understanding how OR helps in decision making
B.SC., MATHEMATICS - 08				
160	OPERATIONS RESEARCH-I	1808531	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)Improve capabilities in the students for understanding and analyzing different kind of situations in the real-world (ii)Involve limited resources and find the optimal solution within the constraints.
161	OPERATIONS RESEARCH-II	1808636	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)To aim at improving capabilities of the students for understanding and analyzing different kind of situations in the real-world. (ii)To cover some analytical methods like sequencing, inventory methods, replacement models to help to make them better decisions.
162	NUMERICAL METHODS I	1908319	Skill Development	The Student will be able to acquire the skill to (i)Solve real world problems using various numerical approximation techniques. (ii)Approximate using various interpolation techniques and solve numerically linear system of equations.
163	NUMERICAL METHODS II	1908424	Skill Development	The Student will be able to acquire the skill to (i)Solve real world problems using interpolation. (ii)Solve Calculus problems by numerical approximation techniques.



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164	CLASSICAL ALGEBRA	2008101	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)Use binomial, exponential and logarithmic series and solve related problems. (ii)Know about various methods to find the roots of the polynomial equations. (iii)Develop the skills of the students in the area of matrices
165	DIFFERENTIAL CALCULUS	2008102	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)To obtain problem solving skills in derivatives in real life application. (ii)To identify and solve problems on derivatives in both Cartesian and polar coordinates with application.
166	TRIGONOMETRY	2008208	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)Acquire the knowledge of circular and hyperbolic trigonometric functions. (ii)Apply various methods to solve problems on summation of series
167	INTEGRAL CALCULUS	2008209	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)Use appropriate tools of Integral Calculus in solving applied problems. (ii)Understand the application of definite integral.
168	DIFFERENTIAL EQUATIONS	1908317	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)Estimate first order and higher order ordinary differential equations using appropriate methods. (ii)Identify and obtain the solutions for PDE of standard types.
169	VECTOR CALCULUS AND ANALYTICAL GEOMETRY OF THREE DIMENSIONS	1908422	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)Exhibit in depth the analytical and critical thinking. (ii)Identify, formulate and solve real world problems.
170	ALGEBRAIC STRUCTURE	1808527	Employability	The Student will be able to apply the following concepts which will help in taking up entrance exam and gain employability opportunities in relevant fields. (i)To demonstrate understanding of the relationships between abstract algebraic structures with familiar numbers systems such as the integers and real numbers. (ii)To produce rigorous proofs of propositions arising in the context of abstract algebra
171	DISCRETE MATHEMATICS	1808530	Skill Development	The Student will be able to acquire the skill (i)To summarize the notion of mathematical thinking and algorithmic thinking. (ii)To write and evaluate a proof or outline the basic structure of and give examples. (iii)To define how graph serve as models for many standard problems by classifying as graphs, trees, Euler graph, cut set.
B.SC., PHYSICS - 09				



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172	MECHANICS AND PROPERTIES OF MATTER	2009101	Employability	CO1 To Discuss and use Laws of impact, study the behavior of rigid body dynamics. CO2 Examine the definition for centre of gravity in hemisphere, hollow hemisphere, etc. CO3 Study the elastic behavior in terms of three moduli of elasticity and working of torsion Pendulum. Study of bending of beams and analyze the expression for Young's Modulus. CO4 Analyze the performance of hydrostatic and hydrodynamics. CO5 Explain the surface tension and viscosity of fluid and support the interesting phenomena associated with liquid surface. Soap films provide an analogue solution to many engineering problems.
173	THERMAL PHYSICS AND ACOUSTICS	2009204	Employability	CO1 To acquire knowledge on how to distinguish between temperature and heat. Introduce him/her to the field of thermometry and explain practical measurements of high temperature as well as low temperature physics. Student identifies the relationship between heat capacity, specific heat capacity. The study of Low temperature Physics sets the basis for the students to understand cryogenics, superconductivity, superfluidity and Condensed Matter Physics. CO2 Derive the efficiency of Carnot's engine. Draw the significance of first law and second law of thermodynamics. Discuss the implications of the laws of Thermodynamics in diesel and petrol engines and analyze their performance of thermodynamic systems viz efficiency by problems. An Insight into thermodynamic properties like enthalpy, entropy. CO3 Study the process of thermal conductivity and apply it to good and bad conductors. CO4 Understand physical characteristics of SHM and obtaining solution of the oscillator using differential equations. Use Lissajous figstem. ect and shine in all the fields plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule
174	OPTICS	1909309	Employability	CO1 Outline basic knowledge of principles and theories about the behavior of light. CO2 Discus the principle of superposition of wave so thus, uses these ideas to understand the wave nature of light through working of interferometer. CO3 Extend the knowledge about nature of light through diffraction techniques; apply mathematical principles to analyze the optical instruments. CO4 Interpret basic formulation of polarization and gain knowledge about polarimeter . CO5 Relate the principles of optics to various fields such as spectroscopy and laser physics.



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175	ATOMIC PHYSICS	1909411	Employability	CO1 Identify the properties of positive rays and explain various man spectrographs. CO2 Demonstrate a working, quantitative understanding of the photoelectric effect and list same photoelectric devices and explain performance. CO3 Develop semi classical model of the atom and show how these model lead to quantum mechanics. CO4 Apply selection ruler and analyze the fine structure of atomic spectra. CO5 Make use of the effect of magnetic field on atomic spectra and explain normal and anomalous Zeeman effect. CO6 Distinguish between continues and characteristic X-ray spectra and to input how the Compton established the particle nature of radiation.
176	ELECTRICITY AND ELECTROMAGNETISM	1809515	Employability	CO1 Demonstrate the relationship between thermodynamics and electricity. CO2 Compare and contrast D.C and A.C circuits. CO3 Apply theorems to construct and solve electric circuits. CO4 Design and construct experiments as well to analyze and interpret magneto static concepts. CO5 Relate the principles and of electromagnetic and build simple circuits involving inductors. CO6 Discuss the four fundamental equation that govern all electromagnetic phenomena.
177	MATHEMATICAL METHODS IN PHYSICS	1809516	Employability	CO1 Discuss basic mathematical concepts in vector calculus and apply them to solve problems in hydrodynamics. CO2 Outline the fundamentals of matrixes and illustrate their importance in physics. CO3 Explain special functions such as Beta Gamma and series solution of Bessel and Legendre differential equations. CO4 Deduce Lagrangian equation of motion and compute solutions of various simple physical systems. CO5 Solve Hamiltonians of simple system and derivations of equation of motion.
178	SOLID STATE PHYSICS	1809517	Employability	CO1 Summarize the fundamentals of crystals structure; Related the significance of crystal study with industry and other applications. CO2 Experiment with X-ray diffraction techniques; Apply proper methods to explore crystal imperfections. CO3 Compare and contrast bonding in crystals. CO4 Investigate the theoretical fundamentals of lattice vibrations; The theory with the applications such as super conductivity. CO5 Analyze concepts of dielectrics; Categorize types of polarization and apply theory to inspect different types of materials. CO6 Compare the different types of magnetic materials and discuss the necessary theory to understand their basic properties of magnetic materials.



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179	BASIC ELECTRONICS	1809518	Employability/Entrepreneurship	CO1 Interpret the conductivity behavior of solids based on their knowledge acquired in atomic physics course. Explain the properties of semiconductors, their basic configuration, their characteristics, construct and analyze various electronic circuits which have very relevant applications, classify various rectifier circuits based on their efficiency and components used. CO2 To extend the ideas of diodes to understand transistors, build amplifier circuits and analyze based on various parameters. CO3 Classify various transistors amplifier circuits based on their nature, characteristics and working. CO4 Develop oscillators, models using amplifiers construct, classify and categorize various types of oscillators. Extend these oscillators towards designing different types of multivibrators. CO5 Identify the need for special semiconductor devices, Extend their theoretical knowledge in construction of these devices and analyze their behavior using application oriented electronic circuits.
180	APPLIED ELECTRONICS	1709519	Employability/Entrepreneurship	CO1 Summarize the characteristics of operational amplifier its parameters and construct circuit to perform various mathematical operation. CO2 Solve simultaneous equation and differential equation using electronic circuit analyzes the performance of electronic circuit in handling mathematical equations. Design circuits to generate waveform to perform analog computation. CO3 Extend their knowledge of digital analog circuit to understand 555 timer, design circuits which are very commonly used in various applications. CO4 Compare digital and analog systems, discuss the need for conversion and design circuits for the same. CO5 Classify semiconductor memories based on the principle of operation, categorize and compare them based on the size and other memory parameters.
181	RELATIVITY AND QUANTUM MECHANICS	1809620	Employability	CO1 To describe the basic concepts of relativity and to translate the mathematical equations to physical concepts and vice-versa. CO2 To identify the wave nature of matter; to illustrate the wave-particle duality with experiments. CO3 To apply the concepts of basic postulates Quantum mechanics; compute the Schrodinger equation for the systems. CO4 Associate the Quantum mechanics wave functions with the corresponding operators and eigen values. CO5 To deduce angular momentum operators. To evaluate various commutator relations of orbital and spin angular momenta. CO6 To solve the Schrodinger equation of physically important one dimension potentials. CO7 To estimate the shape of wave functions; to conceive methods such as separation of variables to solve three dimension problems.



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182	NUCLEAR AND PARTICLE PHYSICS	1809621	Employability	CO1 Characterize nuclei based on their general properties and describe qualitatively models of nuclear structure. CO2 Outline the mechanism of radioactivity and summarize the necessary theories related to it. CO3 Quantify radioactivity and describe its dependence using concepts of half life. CO4 Relate the properties of nature of nuclear system with radiation detectors and particle acceleration. CO5 Paraphrase basic aspects of nuclear reaction and calculate Q-value and realize the nature of the reaction. CO6 Apply the fission and fusion well as nuclear energy in nuclear reactors and stellar energy in star. CO7 Appraise the theoretical prediction of nuclear reaction to understand the host of sub atomic particle nature reveals.
183	DIGITAL ELECTRONICS	1709622	Employability/Entrepreneurship	CO1 Classify numbers based on various number systems using digital technology and apply to solve binary operation. CO2 Interpret real life situations using AND, OR, NOT, basic logic gates and extend their ideas to universal building blocks. Infer operation using Boolean Algebra simplify using mapping techniques. CO3 Construct analyze digital circuits - combinational and using logic circuits. CO4 Build sequential circuits and analyze working. CO5 Construct digital circuits – registers and counters analyze their working. CO6 Explain basic of IC technology various process during fabrication and integration.
184	MICROPROCESSOR FUNDAMENTALS	1809623	Employability/Entrepreneurship /Skill Development	CO1 Explain the basic concepts of microprocessor architecture and describe the functions of different pins. CO2 Apply programming instruction sets of microprocessor and execute assembly language programs. CO3 Recognize basic ideas of memory; Extend their knowledge in memory interfacing to 8085. CO4 Apply the programming techniques to interface I/O ports to 8085. CO5 Developing algorithm to find solution for real time problems.
185	ALLIED PHYSICS I - (FOR B.SC CHEMISTRY STUDENTS)	1909310	Employability	CO1 Explain SHM, Extend their knowledge in the study of various dynamic motions analyzes and it demonstrates mathematically. CO2 Explain their knowledge of understanding about materials and their behaviors and apply it to various situations in laboratory and real life. CO3 Comprehend basic concept of thermodynamics concept of entropy and associated theorems able to interpret the process of flow temperature physics in the background of growth of this technology. CO4 Articulate the knowledge about electric current resistance, capacitance in terms of potential electric field and electric correlate the connection between electric field and magnetic field and analyze them mathematically verify circuits and apply the concepts to construct circuits and study them. CO5 Apply the basic knowledge of principles and theory about behaviors of light and explain several phenomena we observe in daily the using mathematically interpretation.



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186	ALLIED PHYSICS II - (FOR B.SC CHEMISTRY STUDENTS)	1909412	Employability	<p>CO1 Explain the concepts of Interference diffraction using principles of superposition of waves, Interpret wave patterns. CO2 Outline the basic foundation of different atom models and various experiments establishing quantum concepts. Relate the importance of interpreting improving theoretical models based on observation. Appreciate interdisciplinary nature of science. CO3 Summarize the properties of nuclei, nuclear forces structure of atomic nucleus and nuclear models. Solve problems on delay rate half life and mean life. Interpret nucleus process like fission fusion and production of nuclear energy in nuclear reactors atom bombs and stars. CO4 To describe the basic concepts of relativity like equivalence principle, inertial frames and Lorentz transformation. Extend their knowledge on concepts of relativity and translate the mathematical equation to physical concepts and vice versa. Summarize the working of semiconductor devices like junction diode, zener diode, transistors. Interpret the real life solutions stem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems.</p>
187	ALLIED PHYSICS I - (FOR B.SC MATHS STUDENTS)	2009102	Employability	<p>CO1 Explain SHM, Extend their knowledge in the study of various dynamic motions analyzes and it demonstrates mathematically. CO2 Explain their knowledge of understanding about materials and their behaviors and apply it to various situations in laboratory and real life. CO3 Comprehend basic concept of thermodynamics concept of entropy and associated theorems able to interpret the process of flow temperature physics in the background oof growth of this technology. CO4 Articulate the knowledge about electric current resistance, capacitance in terms of potential electric field and electric correlate the connection between electric field and magnetic field and analyze them mathematically verify circuits and apply the concepts to construct circuits and study them. CO5 Apply the basic knowledge of principles and theory about behaviors of light and explain several phenomena we observe in daily the using mathematically interpretation.</p>



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188	ALLIED PHYSICS II - (FOR B.SC MATHS STUDENTS)	2009205	Employability	<p>CO1 Explain the concepts of Interference diffraction using principles of superposition of waves, Interpret wave patterns. CO2 Outline the basic foundation of different atom models and various experiments establishing quantum concepts. Relate the importance of interpreting improving theoretical models based on observation. Appreciate interdisciplinary nature of science. CO3 Summarize the properties of nuclei, nuclear forces structure of atomic nucleus and nuclear models. Solve problems on delay rate half life and mean life. Interpret nucleus process like fission fusion and production of nuclear energy in nuclear reactors atom bombs and stars. CO4 To describe the basic concepts of relativity like equivalence principle, inertial frames and Lorentz transformation. Extend their knowledge on concepts of relativity and translate the mathematical equation to physical concepts and vice versa. Summarize the working of semiconductor devices like junction diode, zener diode, transistors. Interpret the real life solutions stem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems.</p>
189	PHYSICS IN EVERYDAY LIFE – I	2009103	Employability/Skill Development	<p>CO1 Extend the basic knowledge of workforce energy to understand real life happening. CO2 Relate different forms of energy and interpret working of various appliances / concepts involving energy. CO3 Demonstrate the application of heat energy in everyday life. CO4 Build the concepts and understanding about light its proportion various phenomena. CO5 Extend the knowledge of heat to understand the principle behind various happenings day to life.</p>
190	PHYSICS IN EVERYDAY LIFE – II	2009206	Employability/Skill Development	<p>CO1 Apply the idea of Bernoulli's theorem to interpret various important things around us. CO2 Summarize principles of physics to understand the concept of real life situation. CO3 Plan experiments to translate the learning into hands on activities. CO4 Relate the optical phenomena in sky and space with knowledge of light. CO5 Construct demonstration and build on the basic ideas on sound and acoustics.</p>
191	CORE PRACTICAL I	2009207	Skill Development	<p>CO1 Apply the knowledge of mathematics physics fundamentals and using instrumentation, technics to arrive at solutions for various problems. CO2 Translate basics laws and theories to demonstrations to determine various preparations of materials given. CO3 Relate application of experiment in real life situation. CO4 Demonstrate experiments involving basic concept of properties of matter, sound, heat, optics and usage of KT tools.</p>
192	CORE PRACTICAL II	1809413	Skill Development	<p>CO1 Develop skills to understand the concept of elastic constants of solid and acquire knowledge of applications. CO2 Demonstrate experiments to involving various optical phenomena, principles, workings and application of optical instruments. CO3 Apply standard method to calibrate the analog meters and to measure various physical quantities.</p>



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193	CORE PRACTICAL III	1809624	Skill Development	CO1 The student will be able to Analyze the nature of light both quantitative and quantitatively. CO2 Apply the theory the design basic electrical circuits. CO3 Associate theoretical concepts like seebeck effect and electromagnetism with practical demonstration.
194	CORE PRACTICAL IV	1809625	Skill Development	CO1 Substitute basic laws and theories learnt in class to use junction diode, Zener diode, transistors etc. CO2 Apply the theory to design basic electrical circuits. CO3 Analyze the response of various electrical devices using the circuits construction. CO4 Interpret the application of basic circuit to create amplification, oscillation, regulate power supply, logical combinations etc.
195	CORE PRACTICAL V	1809626	Skill Development	CO1 Solve combinational circuits of linear IC's and compute the necessary output. CO2 Relate the theory learnt to design OP-AMP and IC-555 circuits. CO3 Apply the algorithm learnt in classroom to write and execute assembly language program using 8085 Microprocessor. CO4 Correlate theoretical and practical ideas with software
196	ALLIED PHYSICS PRACTICALS- (FOR B.SC CHEMISTRY STUDENTS)	1909414	Skill Development	CO1 Relate scientific methods and recall the process of measuring different physical variables. CO2 Demonstrate the fundamentals of instrumentation data acquisition and interpretation of results. CO3 Apply the concepts of Physics to understand material properties. CO4 Experiment with fundamental of optics, acoustics, electricity and magnetism.
197	ALLIED PHYSICS PRACTICALS- (FOR B.SC MATHS STUDENTS)	2009208	Skill Development	CO1 Relate scientific methods and recall the process of measuring different physical variables. CO2 Demonstrate the fundamentals of instrumentation data acquisition and interpretation of results. CO3 Apply the concepts of Physics to understand material properties. CO4 Experiment with fundamental of optics, acoustics, electricity and magnetism.
B.SC., CHEMISTRY - 10				
198	ALLIED CHEMISTRY – I	1610410	Employability/Skill Development	CO1 Discuss the applications of nuclear energy for useful purposes and radio isotopes in medical and industrial field and also explain the radio activity, predict the products in nuclear reactions. CO2 Predict the geometry of organic compounds by using concept of hybridization and analyze the various types of organic reactions like addition, substitution, elimination...etc. and Assess the mechanism of reactions like nitration, halogenation, and alkylation. CO3 Calculate the efficiency of heat engine and Predict the spontaneity of various thermodynamic processes using the concepts such as entropy, Gibbs free energy and enthalpy. CO4 Outline the different types of fuels and its applications and convert hard water into soft water from the concepts of zeolite, reverse osmosis and demineralization processes. CO5 Demonstrate the usage of various types of preservatives to preserve the specimens and explain the environmental pollutions like water pollution, soil pollution, air pollution and its adverse effects.

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199	ALLIED CHEMISTRY – II	1610412	Employability/Skill Development	CO1 Predict the geometry of coordination compounds using the concept of hybridization and estimate the metal ions like nickel, aluminum etc., present in the given sample gravimetrically by converting them into coordination compounds. CO2 Explain various types of sugars and amino acids and the inter conversions, preparation and properties of sugars. CO3 Analyse the adulterants in various food samples like sugar, salt, turmeric powder, honey etc., and the need for Choice of proper balanced diet from calorific values of different food. CO4 Demonstrate the usage of herbs like thulasi, kezhaneli, neem as remedies for common diseases and Explain the importance of chemistry in Siddha, Ayurveda and homeopathy medicines. CO5 Explain the various volumetric solutions and estimate the amount of solute present in the given solution by volumetric principles – separate the organic compounds by using chromatographic techniques like column, paper, thin layer chromatography.
200	ANALYTICAL CHEMISTRY	1810517(A)	Employability/Skill Development	CO 1. To enumerate on Laboratory hygiene and safety and to tabulate the statistical analysis of data. CO2. To quantify the ions gravimetrically and assess the differential weight with respect to temperature thermogravimetrically. CO3. To identify different currents, and distinguish metal ions by half wave potential from polarogram. To determine the end point of the titrations by amperometry. To interpret the presence of racemic mixture by polarimeter. CO4 To analyse the mixture using column, paper, HPLC, and gas chromatography. CO5. To deduce and quantify the presence of metal ions by flame emission and atomic absorption spectroscopy.
201	APPLIED CHEMISTRY	1810622(A)	Employability/Entrepreneurship /Skill Development	CO1 Define the pragmatic impacts of polymer in human daily life. CO2 Quote the chemical changes which are taking place in a polymer like degradation with live examples. CO3 Explain the importance of Glass transition temperature (T _g) as a tool to modify the physical properties of drugs and polymer molecules. CO4 Solve the chemical quality related issues of dairy industry. CO5 Apply the knowledge on physico-chemical properties and composition of milk to distribute them into useful dairy products. CO6 Summarise the concepts of forensic science for its pivotal role in legal system and related issues, CO7 Explain the major facts of investigations as well as evidence collection and preservation techniques. CO8 Analyse a crime scene and they will be in a position to assess and interpret the evidences based on chemical and instrumental analysis. CO9 Predict the chemical formulation of drugs which are chronically used. CO10. Compare the size of objects of nano and micro levels with bulk entities. CO11 Explain the impostem. nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems.



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202	POLYMER CHEMISTRY	2010623	Employability/Skill Development	CO1 To know the types of polymers and the chemistry of polymerization. CO2 To understand the physical properties of polymers, their reactions and degradation. CO3 To acquire knowledge about the polymerisation techniques and polymer processing. CO4 To know the chemistry of individual polymers, their preparation properties. CO5 To have an idea about the recent advances in polymer science.
B.SC., BIOCHEMISTRY - 11				
203	NUTRITIONAL BIOCHEMISTRY	2011101	Employability/Skill Development	CO1 Realizing the fact that "Food as medicine", CO2 Cognizance of basic food groups viz. Carbohydrates, proteins and lipids and their nutritional aspects as well as calorific value CO3 Identify and explain nutrients in foods and the specific functions in maintaining health. CO4 Exposure to the nature and biomedical significance of vitamins and minerals present in food CO5 Analyzing the biological importance of major and minor trace elements (Minerals) in the food CO6 Understanding the correlation between importance of nutrients and life style disorders viz. diabetes mellitus, renal failure and cardiovascular diseases CO7 Apply knowledge of the role of nutrition and healthy diet for disease prevention.
204	CHEMISTRY I	2011102	Employability/Skill Development	CO1 Know the discovery of electron, proton and neutron and their characteristics (various atom models), formation of different types of bonds, geometry of simple molecules, calculate bond order of hetero homo atomic molecules. CO2 Apply the fundamental principles of measurement, matter (pressure from a macroscopic and microscopic perspective), chemical bonding, general chemical reactivity and solution chemistry to subsequent courses in science. CO3 To make students capable of understanding and studying organic reactions To have exposure to various emerging new areas of organic chemistry To develop skills required for the qualitative analysis of organic compounds CO4 Recognize the basic terms of thermodynamic. Able to predict the energy change in heat capacities at constant volume and pressure and their relationship. Able to derive Joule's law and its applications. And to derive relationship between modification of distribution law when solute undergoes dissociation CO5 stem. nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems. stic Roots and Charac



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205	BASICS OF MEDICAL TERMINOLOGIES	2011103	Employability/Skill Development	CO1 Define Medical Terminologies CO2 Compare Different Human Diseases CO3 Apply Medical Terms In Health Sectors Or Medical Reports CO4 Analyse The Functions Of Different Parts of Human body CO5 Interpret Normal Values Of Metabolic Parameters CO6 Combine Prefix And Suffix With Root words And Build Or Frame Medical Terminologies.
206	CELL BIOLOGY	2011204	Employability/Skill Development	CO1 Identify and explain the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially the organelles CO2 Demonstrate familiarity with various elements of cytoskeleton CO3 State the structure, function and composition of cell membrane and communicate the types and mechanism of membrane transport CO4 Illustrate the phases of cell cycle; in particular mitosis and describe the significance of meiosis in genetic diversity CO5 Relate the structure and biological role of extracellular matrix and cell-cell junction with physiological processes CO6 Apply the knowledge of cell biology in practicals and interpret experimental results



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207	CHEMISTRY II	2011205	Employability/Skill Development	<p>CO1 To have a basic idea about nuclear Chemistry and its applications, nuclear reactions and radioactivity and their medical importance (isotopes).</p> <p>CO2 To study the various factors which affect the rate of a chemical reaction such as concentration, temperature, solvent, catalyst etc. and theories of chemical kinetics, and also to describe a reaction rate in terms of a change in concentration divided by a change in time (at constant volume) and a general form of a (differential) rate law</p> <p>CO3 Recognize the bonding in transition compounds by VBT and CFST theories. Able to predict the geometry of coordination compounds and type of hybridization. Able to recognize the biological reaction alkali and alkaline earth metals, nitrogen fixation, hemoglobin and myoglobin.</p> <p>CO4 Acquire basic knowledge of electrode conduction. Determine the solubility of sparingly soluble salts. Explain the various methods for the determination of transport number. Understand theories of electrochemical cstem.</p> <p>ect and shine in all the fields plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule and control project activities</p>
208	PLANT BIOACTIVE COMPOUNDS IN TRADITIONAL MEDICINE.	2011206	Employability/Skill Development	<p>CO1 Define and classify bioactive compounds with proper examples</p> <p>CO2 Differentiate traditional and modern medicine</p> <p>CO3 Discuss the plants used in traditional medicine of Ayurveda, siddha, Unani and Greek medicine</p> <p>CO4 Identify the plants used in the treatment of diabetes, arthritis and immune modulation</p> <p>CO5 Analyse the plants with different biochemical techniques</p>
209	CHEMISTRY OF BIOMOLECULES	1911309	Employability/Skill Development	<p>Comprehend the structure of prokaryotic and eukaryotic cells and function of their cell organelles.</p> <p>Understand the structure, composition and function of cytoskeleton and extracellular matrix</p> <p>Explain the ultrastructure of biomembrane and the transport mechanism displayed by it.</p>



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210	MICROBIOLOGY - I	1911310	Employability/Skill Development	<p>Understand about the microorganisms and its nature.</p> <p>Demonstrate staining procedures.</p> <p>Measure the growth of microorganisms and apply the knowledge in food , Water industry.</p>
211	BIOCHEMICAL TECHNIQUES	1911411	Employability/Entrepreneurship /Skill Development	<p>separate biological sample by centrifugation and separate sub cellular organelles by differential centrifugation</p> <p>acquiring analytical skills to separate amino acids and sugar using paper and thin layer chromatography.</p> <p>assay biochemical parameters using UV spectroscopy and spectrofluorimetry, electrophoresis.</p>
212	MICROBIOLOGY - II	1911412	Employability/Entrepreneurship /Skill Development	<p>Understand about the microorganisms and its nature.</p> <p>Demonstrate staining procedures.</p> <p>Measure the growth of microorganisms and apply the knowledge in food , Water industry.</p>
213	ENZYMES	1811515	Employability/Skill Development	<p>Gain fundamental knowledge about the nature, properties, nomenclature and classification of enzymes and coenzymes.</p> <p>Analyze factors affecting enzyme activity, deduce Michaleis Menten equation and apply the understanding on enzyme inhibition in medicine and industry.</p> <p>Relate the use of enzymes and immobilized enzymes in industry.</p>
214	INTERMEDIARY METABOLISM	1811516	Skill Development	<p>Explain how carbohydrates get metabolized in the body via glycolysis, TCA cycle and how we derive energy from it.</p> <p>Understand how ATP is formed through Electron transport chain and oxidative phosphorylation.</p> <p>Describe the metabolism of lipids and nucleic acids.</p>
215	HUMAN PHYSIOLOGY	1811517	Employability/Entrepreneurship /Skill Development	<p>Understand the functions of blood and circulatory system.</p> <p>Learn the process of digestion and absorption and it can be applied in the field of medicine.</p> <p>Learn the process of gaseous exchange in tissues and lungs and the mechanism of muscle contraction</p>



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216	MOLECULAR BIOLOGY	1811518	Employability/Skill Development	Carry out experiments related to gene expression studies. Develop Medical kits to identify the microorganisms using molecular biology techniques Understand the concepts of genetic code and relate it to translation process and explain protein biosynthesis
217	PRINCIPLES OF BIOTECHNOLOGY	1811519	Employability/Entrepreneurship /Skill Development	Familiarise with the basic knowledge of Tissue culture, Molecular biology, rDNA technology, plant transformation. Opportunity to contribute to cutting edge research. Have access to training and support to develop a broad range of professional skills.
218	BIOINFORMATICS	1811520	Employability/Skill Development	"Gain Knowledge as professionals are working in pharmaceutical and Biotech companies. Perform and infer bioinformatics and statistical analyses with real molecular biology data. Develop pipelines of analysis tools to analyse real-world biological data sets"
219	IMMUNOLOGY	1811621	Employability/Skill Development	Carry out experiments related to gene expression studies. Ability to Develop testing kits to identify the microorganisms using molecular biology techniques Understand the concepts of genetic code and relate it to translation process and explain protein biosynthesis
220	GENETICS	1811624	Skill Development	Comprehend the chemical basis of heredity. Gain knowledge required to design, execute, and analyze the results of genetic experimentation in biological model systems. Understand the role of genetic technologies in industries related to biotechnology, pharmaceuticals
B.SC., BIOTECHNOLOGY - 12				
221	CELL BIOLOGY	2012101	Employability, Skill development	CO1: To have an insight of Cell as the fundamental unit of life and to compare the complexity of Eukaryotic cell with the primitive prokaryotic cell, with the identification of specific role of organelles that attribute to the co-ordinated function of cell. CO2: To analyze the structure and functions of plasma membrane and the various mechanisms that regulates the transport process across cell membranes. CO3: To selectively categorize the cytoskeletal backbone, cell motility organs and to describe the cell cycle and cell death. CO4: To predict the response of cells to intra and extracellular environment by studying about the intracellular signaling pathways.CO5: To specifically examine life processes at the cellular level, such as protein secretion, targeting and protein degradation.



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222	MICROBIOLOGY	2012102	Employability, Entrepreneurship, Skill development	CO1: Outline the evolution of microbiology and characterize microorganisms. Categorize the methods of sterilization and identify the significance of culture media in the growth of different microbes.CO2: Categorize the methods of sterilization and identify the significance of culture media in the growth of different microbes.CO3: Discover different staining procedures and microscopic techniques used to visualize microbial cells.CO4: Distinguish between normal flora and pathogens.CO5: Define and describe the role of microbes in food intoxications and soil fertility
223	BIOTECHNOLOGY FOR SOCIETY	2012103	Employability, Entrepreneurship	CO1: Identify the importance of biotechnology in different agricultural practices.CO2: Appreciate the role played by microorganisms in the development of food supplements, biological fertilizers and pesticides.CO3: Gain knowledge about the application of biotechnology in transforming environmental pollutants and learn the detrimental effects of biological weapons.CO4: Summarize the basics of antibiotics and outline the production of penicillin.CO5: Know the significance and uses of transgenic plants.
224	MOLECULAR BIOLOGY	2012204	Employability, Skill development	CO1: Explain the fundamental properties, structure and processes of nucleic acids CO2: Discuss the molecular mechanism of Replication in prokaryotes CO3: Elucidate the transcription mechanism in prokaryotes. CO4: Elucidate the transcription mechanism in prokaryotes CO5: Elaborate the regulation of gene expression using Operon concept
225	CHEMISTRY IN EVERYDAY LIFE	2012205	Employability, Entrepreneurship, Skill development	Illustrate various mechanisms that regulate immune responses and maintain tolerance. Apply basic technique to identify Antigen antibody reactions in disease diagnosis. Gain Knowledge in immunological techniques and same can be used in Vaccine production, diagnosis of disease.
226	FOOD SCIENCE	2012206	Employability, Entrepreneurship	Gain knowledge on the metabolism of amino acids and formation of urea. Understand the catabolic pathways of purine and pyrimidine Understand the clinical significance of faay acid metabolism.
227	BIOINSTRUMENTATION	1912311	Employability, Entrepreneurship, Skill development	Explain the principles of molecular cloning and PCR, cell transfection and Western blotting. Follow the general safety routines in molecular biology laboratory. Use instrumentation and gene technology methods for separation and analysis of proteins and nucleic acids
228	BIOCHEMISTRY	1912312	Employability, Skill development	Students will be able to understand about the biomolecules and its role in various metabolic processes.
229	GENETIC ENGINEERING	1912413	Employability, Entrepreneurship, Skill development	Students will be able to understand about cloning vectors, DNA amplification techniques, screening techniques for identifying recombinants, transfer of recombinants to host cells used in genetic engineering technology
230	FUNDAMENTALS OF COMPUTERS AND BIOSTATISTICS	1912414	Employability, Skill development	The student will be able to understand various microorganisms and their applications in various fields of biotechnology
231	IMMUNOLOGY	1812518	Employability, Skill development	Students will be able to gain knowledge on the role of defense mechanism, lymphocytes, antigen antibody reactions and vaccines which is vital to understand immune system of the body



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232	BIOINFORMATICS	1812519	Employability, Skill development	Students will be able to understand about various nucleotide, protein databases, steps in retrieving and analyzing information from databases to understand about an organism or biological molecule.
233	BIOPROCESS TECHNOLOGY	1812520	Employability, Skill development	The student will be able to understand the basic concepts and principles of atoms, molecules and carbohydrates.
234	FOOD BIOTECHNOLOGY	1812522	Employability, Entrepreneurship, Skill development	Discover the role of biotechnology in food processing industries. Execute the biotechnological production of commercially important metabolites. Apply the principle of downstream processing and explain the various stages involved in downstream processing. Evaluate the molecular diagnostic techniques pertaining to identification of food adulterants. Assess the safety aspects and social issues related to applications and implications of genetically modified foods.
235	MARINE BIOTECHNOLOGY	1812522	Employability, Entrepreneurship, Skill development	Students will be able to gain knowledge on the historical background of aquaculture, construction system for aquafarms, cultivation of various aquatic organisms of commercial importance and the application of aquatic organisms in protecting environment from pollutants
236	AGRICULTURAL BIOTECHNOLOGY	1812523	Employability, Entrepreneurship, Skill development	The students will be able to understand the role of biotechnology in developing plants that have resistance to biotic and abiotic stress, promote plant growth by plant growth promoting microorganisms and application of transgenic crops along with its ethical issues.
237	BASICS IN STEM CELL BIOLOGY	1812523 (C)	Employability, Entrepreneurship, Skill development	Exhibit knowledge on the types and sources of embryonic, adult and induced pluripotent stem cells and to differentiate the potential of embryonic stem cells with adult stem cells. Understand the properties, differentiation and regulation stem cells. Share insights into techniques involved in isolation, expansion and identification of stem cells. Evaluate the role of stem cells in clinical applications for human health and improvement. Discuss about animal models for regeneration. Acquire a deeper understanding of stem cell banks and its importance. Understand the national & international guidelines of stem cell research and also recent advancements.
238	ANIMAL BIOTECHNOLOGY	1812624	Employability, Skill development	Students will be able to gain knowledge about animal tissue culture, strategies of gene transfer and various types of stem cells.
239	PLANT BIOTECHNOLOGY	1812625	Employability, Entrepreneurship, Skill development	Students will be able to understand various components required for plant tissue culture and recombinant technology in plants
240	ENVIRONMENTAL BIOTECHNOLOGY	1812626	Employability, Skill development	Students will be able to know about water and air pollution, hazardous chemicals causing pollution and the role of biotechnology in reducing the ill effects of pollution.
241	ENTREPREUNERSHIP , , BIOSAFETY AND BIOETHICS AND INTELLECTUAL PROPERTY RIGHTS	1812627(A)	Employability	Students will be able to understand the importance of Intellectual property rights, biosafety and bioethics in biotechnology



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242	BIOFERTILIZER	1812628	Employability, Entrepreneurship, Skill development	Students will be able to learn about the PGPR and its significance in improving plant growth better during drought state.
243	MEDICAL BIOTECHNOLOGY	1812629	Employability, Entrepreneurship, Skill development	The students will be able to understand the role of biotechnology in medicine such as molecular diagnosis, immuno diagnosis and various clinical trials involved in production of drugs.
244	PUBLIC HEALTH AND HYGIENE	1812628	Employability, Entrepreneurship, Skill development	Describe the scope and importance of public health and hygiene; also the various factors influence the healthy condition among the community. Distinguish the between the various types of causes and effects of environmental pollution. Depict the various types of hygiene measures to be followed and links between healthful housing and healthy living. Gain knowledge on the causes and preventive measures of various non-communicable diseases. Illustrate the significance and development of various organizations related with public health. Gain knowledge on the various legal act pertaining to public health and hygiene
B.SC., PLANT BIOLOGY - 13				
245	HORTICULTURE AND MUSHROOM CULTIVATION	1813519/871351	Employability/Entrepreneurship /Skill Development	CO1. Discuss the history and various management practices in Horticulture, CO2. Demonstrate the about Hydroponic culture and organic farming, CO3. Analyze the different crop protection measures and Plant propagation techniques, CO4. Comprehend the harvest and storing technology, CO5. Explain the Prospects and Scope of Mushroom cultivation
246	VERMITECHNOLOGY (NME)	2013103	Employability/Entrepreneurship	CO1. Apply vermiculture techniques by using different types of soil, CO2. Discuss the role of local species of earthworm in vermitechnology, CO3. Design a vermicomposting bed, CO4. Apply the procedure for vermicompost, CO5. Apply the methods to reduce the enemies of earthworms during vermicomposting
B.SC., VISUAL COMMUNICATION - 14				
247	DRAWING	2014104	Skill Development	1 Interpret about different shapes and sign 2 Introduction to visual elements 3 Identify and create patterns and textures 4 Determine the image Perspective 5 Analyzing and create Still life image
248	GRAPHIC DESIGN	2014105	Skill Development	1 Creating company name and brand name 2 Introduction to monogram and logo design 3 Creating visiting cards and letter head 4 Analyzing Print advertisement and tint preparation 5 Creating Brochures and poster



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249	WRITING FOR MEDIA	2014206	Skill Development	<ol style="list-style-type: none">1 Developing an idea of script and style.2 Applying the principles of script writing3 Organizing idea and writing for advertising4 Evaluating the audio visual medium5 Developing concept for features and documentary
250	PSYCHOLOGY OF MEDIA	2014207	Skill Development	<ol style="list-style-type: none">1 Identify and understand the various school of thoughts in psychology2 Indicate the characteristics of perception and awareness concepts in media psychology3 Determine the importance of colour theory in psychology with references to its aspects4 Discuss and compare the concepts of social behavior and concepts related to visual communication5 Identify and discuss the relation between media and psychology and its impact on the community
251	MURAL PAINTING	2014208	Entrepreneurship/Skill Development	<p>At the end of the Course, the student will be able to imitate original art mix like mosaic, terracotta, tile, etc and excel in contemporary mural painting.</p>
252	DIGITAL ART	2014210	Skill Development	<ol style="list-style-type: none">1 Creating Dynamic Character Illustrations2 Creating Characters within an Environment3 Creating Industrial Design involving mechanical and engineering design aspects which will have full function4 Creating Matt painted environment which can be used on TV or Feature Film5 Creating a Full Comic Book and to publish it in print
253	COMPUTER GRAPHICS	1914313	Employability	<ol style="list-style-type: none">1 Creating a Print Design2 Creating Various types of illustrations3 Creating Print Advertisements for Mass Media4 Creating Newspaper layout that is print ready for publishing5 Creating 2D Advertisement and Greetings using Adobe Animate
250	PHOTOGRAPHY	1914314	Employability	<ol style="list-style-type: none">1 Identify and structure the functions of DSLR camera2 Discuss the various angles, lightings in photography along with experimenting it3 Illustrate the different roles photography can play in the industry4 Construct and develop the structure of photos based on various themes upon analyzing the prospects5 Discuss and create photography portfolio upon the aspects of photography



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254	ADVANCED PHOTOGRAPHY	1914416	Employability/Entrepreneurship /Skill Development	<ol style="list-style-type: none"> 1 Understanding the usage of indoor studio in photography 2 Discuss the various angles, lightings in photography along with experimenting it 3 Applying the various branding techniques, product and model photography 4 Construct and develop the structure of photos based on various themes upon analyzing the prospects 5 Discuss and create photography portfolio upon the aspects of photography
252	MULTIMEDIA	1914417	Employability	<ol style="list-style-type: none"> 1 Creating a Static Multipage Website 2 Creating Motion Graphics for online media and social network 3 Creating Title Design and Intro Design for Movies and TV Production 4 Creating an Explainer Video for a Brand or a Company's Product 5 Creating a Full Video Advertisement with CGI and Motion Graphics
253	DIGITAL CINEMATOGRAPHY	1914418	Employability/Skill Development	<ol style="list-style-type: none"> 1 Understanding cinematic terms 2 Creating jingles for radio 3 Creating PSA 4 Understanding the Camera, lens, lighting and other technical equipment required during shoot 5 Working practically for film, tv shows series.
254	AUDIO VISUAL TECHNIQUES	1814523	Employability/Skill Development	<ol style="list-style-type: none"> 1 Understand the nature of audio visual techniques 2 Classify the levels of technical aspects used in AV 3 Indicate the societal issues and relate with the usage of audio visual aspects 4 Identify and classify the art of making ad films 5 Compute and create short films, ads based on the practice
255	3DS MAX AND MAYA	1814524	Employability	<ol style="list-style-type: none"> 1 Discuss the various approaches, methods and techniques of Animation Technology 2 To apply Audio and Video Production Techniques to an Animation Project 3 Students will use these tools to build complex objects then learn the basic 3-D rendering tools, Movie toons 4 Comparing with basics of modeling, lighting, texturing and rendering, electronic models 5 Developing portfolios based on texturing, creating anatomy models, Creating portfolios based on rigging, set models
B.SC., COMPUTER SCIENCE - 15				
256	OBJECT ORIENTED PROGRAMMING USING C++	2015205	Employability, Skill Development	<ol style="list-style-type: none"> 1. Discuss and elaborate the concept of OOPs. 2. Analyze the problem and apply the retreated concept in Application areas. 3. Usage of pointers and Outline of files.



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257	JAVA PROGRAMMING	1915309	Employability, Skill Development	<ol style="list-style-type: none"> 1. Use an integrated development environment to write, compile, run, and test simple objectoriented Java programs. 2. Read and make elementary modifications to Java programs that solve real-world problems. 3. Be able to create an application using string concept. 4. Be able to create a program using files in application. 5. Be able to create an Applet to create an application. 6. Identify and fix defects and common security issues in code.
258	WEB DESIGN	1815310	Employability, Skill Development	<ol style="list-style-type: none"> 1. Able to classify the HTML Tags and DHTML Style Sheets 2. Able to create webpages using JavaScript Document Object Model and Event Handling.
259	PROGRAMMING IN PHP	1715621	Employability, Skill Development	<ol style="list-style-type: none"> 1. To make the students learn best practices in programming approach 2. Enable the students to create attractive web pages using hypertext
260	PYTHON PROGRAMMING	1715622	Employability, Skill Development	<ol style="list-style-type: none"> 1. To acquire programming skills in core Python 2. Apply the OOP concept in Python
261	ASP.NET PROGRAMMING	1715518	Employability, Skill Development	<ol style="list-style-type: none"> 1. Able to use ASP.NET controls in web applications 2. Apply the concept to create database driven ASP.NET web applications and web services 3. To create applications that use ADO.NET, cookies and web services
M.COM - 20				
262	ADVANCED CORPORATE ACCOUNTING I	2020101	Skill Development	To impart profound knowledge on accounting procedures and standards of corporate houses.
263	FINANCIAL MANAGEMENT	2020102	Employability	To enable students to acquire knowledge on various tools and techniques in making sound financial decisions.
264	CONSUMER BEHAVIOUR	2020103	Employability	To understand the strategic implications of consumer influences on marketing decisions.
265	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	2020104	Employability	To introduce the concept and impact of Logistics and Supply Chain Management with a competitive strategy overview.
266	ADVANCED STATISTICS	2021106	Skill Development	To acquaint students on various advanced statistical techniques applicable in business.
267	ADVANCED CORPORATE ACCOUNTING II	2020205	Skill Development	To enable students in understanding the application of various accounting standards.
268	SERVICE MARKETING	2020206	Employability	To introduce the concepts of service marketing, explain how service features result in certain unique problems in marketing and provide an insight into the marketing strategies.
269	CORPORATE LAWS	2020207	Employability	To gain insight on the various concepts and laws pertaining to corporate houses.
270	CORPORATE GOVERNANCE, ETHICS, AND RESPONSIBILITY OF BUSINESS	2020208	Employability	To educate students on corporate governance and business ethics.
271	RESOURCE MANAGEMENT TECHNIQUE	2021212	Skill Development	To enable students acquire knowledge on various techniques and models relevant in managing resources of the organization.



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272	ACCOUNTING FOR MANAGERS - I	1919309	Skill Development	To impart knowledge on various advanced techniques and systems used in cost accounting.
273	RESEARCH METHODOLOGY	1919310	Skill Development	To impart in-depth insights on various methods used in Research
274	TAX MANAGEMENT - DIRECT TAX	1919311	Employability	To impart knowledge of the important provisions pertaining to Direct Taxes.
275	MANAGERIAL ECONOMICS	1919312	Employability	To focus on the application of Economics in Managing Business
276	INDIA'S FOREIGN TRADE AND INVESTMENT	1919313	Employability	Outcome of this course is to acquaint the students with structure and policy framework of India's Foreign Trade and Investment.
277	ACCOUNTING FOR MANAGERS - II	1919416	Skill Development	To impart indepth knowledge in application of Management tools in Business.
278	ADVERTISEMENT AND SALESMANSHIP	1919417	Employability	To develop an in-depth understanding of the modern concepts and latest techniques of advertising, personal selling and sales force management which constitute a fastgrowing area of marketing.
279	ORGANIZATIONAL BEHAVIOUR	1919418	Employability	To understand and appreciate individual and group behavior in an organization.
280	INDIRECT TAXES	1919420	Employability	To impart knowledge of the important provisions pertaining to Indirect Taxes.
	M.SC., MATHEMATICS - 21			
281	PROBABILITY THEORY	2021103	Employability	The Student will be able to (i)Restate the probability concept with reference to Borel fields and categorize the discrete and continuous distributions by analyzing their characterization and structure. (ii) Demonstrate the application of Limit theorem in various situations. (iii) Prepare a probability model for any given real-life situation through survey.
282	MATHEMATICAL STATISTICS	2021210	Employability	The Student will be able to (i) Summarize the importance of sampling distributions and their classifications. (ii) Appraise the parameter value of any given distribution using statistical tools. (iii) Use the hypotheses testing technique to sample (Variable or Constant in size) collected from real life situation and compare the outcome with the existing one.
283	GRAPH THEORY	2021104	Skill Development	The Student will be able to (i) Apply the different concepts of Graph Theory and its application in day today life. (ii) Enable the students to model the real-world problems into Graph Theory problems and get solutions.
284	FUZZY SETS AND THEIR APPLICATIONS	2021211	Skill Development	The Student will be able to (i) Apply the concepts of fuzzy sets and fuzzy relations. (ii) Apply analysis of function of fuzzy variable using fuzzy logic.
285	NUMBER THEORY AND CRYPTOGRAPHY	1921317	Skill Development	The student will be able to (i) Restate the number theory concept with reference to numbers in different bases and categorize the Euclidean Algorithm and congruences by analyzing their characteristics and structure. (ii) Demonstrate the application of some simple cryptosystem using matrices. (iii) Prepare a formula for primality test and application of elliptic curves in cryptography.



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286	ALGEBRA-I	2021101	Employability	The Student will be able to explain Quadratic forms with suitable examples and apply them to problems
287	REAL ANALYSIS-I	2021102	Employability	The Student will be able to (i) Explain point set topology and functions of bounded variation with suitable examples and apply them to problems (ii) Apply the concept of Riemann – Stieltjes integrals.
288	NUMERICAL ANALYSIS	2021105	Employability, Skill Development	The Student will be able to (i) Solve nonlinear equations and system of nonlinear equations. (ii) Apply Interpolation for unequal and equal intervals and Compute derivatives using numerical differentiation. (iii) Develop numerical techniques to solve calculus problems.
289	ALGEBRA-II	2021207	Employability	The Student will be able to (i) Restate the ideas of Extension Fields, Galois Theory, Finite Fields, Wedderburn's Theorem for finite division rings and Four Squares Theorem. (ii) Understand Algebra and Linear Algebra at Advanced level and apply it in various branches of Engineering and Science
290	REAL ANALYSIS-II	2021208	Employability	The Student will be able to (i) Analyze the ideas of Measure Theory, Lebesgue Integrals, Functions of Several Variables and Fourier Series, Fourier Integrals and their convergence aspects. (ii) Apply The Riesz-Fischer Theorem and Taylor's theorem for functions of R_n to R_1 .
291	DIFFERENTIAL EQUATIONS	2021209	Employability	The Student will be able to (i) Apply the fundamental concepts and the techniques for solving ordinary differential equations in standard forms and using power series. (ii) Analyze non-homogeneous linear systems with constant coefficients. (iii) To know the role of PDE in modern Mathematics. (iv) Solve standard second order PDE by variable separable method.
292	COMPLEX ANALYSIS-I	1921313	Employability	Students will be able to (i) Demonstrate the knowledge of functions of a complex variable. (ii) Analyze the behavior of an analytic function and harmonic function in specified domain
293	TOPOLOGY	1921314	Employability	The Student will be able to (i) Apply the concept of convergence, completeness and continuous mappings in metric spaces. (ii) To demonstrate the applications of topological spaces, compact spaces and connected spaces.
294	MECHANICS	1921315	Employability	The Student will be able to (i) Use basic concepts and principles of classical mechanics, and apply them to simple examples. (ii) Apply the equations of motion for complicated mechanical systems using the Lagrangian and Hamiltonian formulation of classical mechanics
295	DIFFERENTIAL GEOMETRY	1921316	Employability	The student will be able to (i) Examine and describe the concepts of curves, surfaces, involutes, evolutes, surface of revolution. (ii) Demonstrate the application of geodesic on a surface and Gaussian curvature.
296	COMPLEX ANALYSIS-II	1921418	Employability	(i) Determine the infinite product representation of Riemann zeta function and explore Riemann mapping theorem for simply connected regions.
297	FUNCTIONAL ANALYSIS	1921419	Employability	(i) Apply the concepts of Banach spaces, Hilbert spaces and Banach Algebras. (ii) To explain the importance of the Hahn-Banach theorem, Open mapping theorem in Functional Analysis.



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298	TENSOR ANALYSIS AND THEORY OF RELATIVITY	1921419	Employability	(i) Formulate and express a physical law in terms of tensors and simplify it by use of the common form which is independent of the reference coordinate system (ii) Restate the Relativistic Doppler effect with examples.
299	FLUID DYNAMICS	1921421	Employability	(i) Restate the kinematics of a moving fluid. (ii) Demonstrate the applications of Milne Thomson Circle theorem with examples.
300	INTEGRAL EQUATIONS AND CALCULUS OF VARIATIONS	1921422	Employability	(i) Recognize and solve initial value problems and boundary value problems (ii) Explore the methods for finding extreme values of functionals (iii) Demonstrate the application of variational problems with moving boundaries and field of extremals using Jacobi and Legendre conditions
301	DIGITAL LOGIC FUNDAMENTALS	1921318	Skill Development	1. Demonstrate the conversion process of a given number with reference to any base to a number with reference to a different base. 2. Perform the algebraic operation on Binary numbers. 3. Summarize and design logical gates using NOT, OR, AND and NAND gates.
302	ALGORITHMS	1921424	Skill Development	1. Formulate algorithm to find the smallest divisor of an integer and greatest common divisor and develops algorithm to generating prime numbers. 2. Produce Pseudo random numbers using algorithm and Calculate a number to large power and computes the nth Fibonacci number 3. Define Array technique illustrate array counting and array order reversal and illustrate merging and sorting of arrays
M.SC., PHYSICS - 22				
303	MATHEMATICAL PHYSICS I	2022101	Employability/Entrepreneurship /Skill Development	CO1 Comprehend the concept of Vector analysis along with Applications of Vectors. CO2 Conceptualize Vector space and study of Dirac Delta Function and Applications. CO3 Analyze characteristics of matrices and its different types and also solve linear equations. CO4 Solve Linear Differential equations and discuss the properties of special functions. CO5 Realize the basics of Tensor Analysis and its applications.
304	CLASSICAL MECHANICS AND RELATIVITY	2022102	Employability/Entrepreneurship /Skill Development	CO1 Understand the concepts of generalized coordinates and momenta and apply the D'Alembert's principle to obtain equation of motion for a given system. CO2 Apply Lagrangian and Hamiltonian formulations for getting equations of motion for various mechanical system. CO3 Distinguish between single body system and many particle systems and simplify a two- body mechanical system into a single particle system. CO4 Understand essential features of a classical problem (like motion under central force, periodic motions), use them to set up and solve the appropriate physics problems. CO5 Apply the Euler's equations of motion to solve problems involving rotations of rigid bodies. CO6 Understand Canonical transformations and use Hamilton-Jacobi formalism to solve mechanical systems. CO7 Distinguish different types of equilibrium. Solve coupled oscillator problems using theory of small oscillations and identify the normal modes.



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305	QUANTUM MECHANICS I	2022103	Employability/Entrepreneurship /Skill Development	CO1 Understand the difference between Classical Mechanics and Old Quantum Theory. CO2 Interpret the conditions and Evaluate problems in Schrödinger's Equation. CO3 Compare the Schrödinger's, Heisenberg and Interaction pictures. CO4 Solve and analyze problems in particle in a box, Square well potential, Barrier penetration and Simple Harmonic Oscillator. CO5 Evaluate and solve problems in three dimensional Spherical Well and Harmonic Oscillator
306	INTEGRATED ELECTRONICS	2022104	Employability/Entrepreneurship /Skill Development	CO1 Understand working of Different Semiconductor devices (Construction, Working Principles and V-I characteristics) and their applications JFET, MOSFET, UJT and SCR. CO2 Operational amplifier circuits to construct Differentiator, Integrator and Instrumentation amplifier, A/D and D/A converters and cherish their real-time applications. CO3 Acquire knowledge about the internal architecture and working of 555 Timer and apply. Recognize of the multitude of applications that can be realized using TIMER 555. CO4 Understand the concepts of gates, Flip-Flops and apply it to construct sequential and combinational circuits. CO5 Identify the working of A/D and D/A converters and grasp their importance in signal processing.
307	MATHEMATICAL PHYSICS II	2022205	Employability/Entrepreneurship /Skill Development	CO1 Understand the basics of complex algebra and evaluation of definite integrals. CO2 Evaluation of coefficients of Fourier series and also its advantages CO3 Deriving Laplace transform, Inverse Laplace transform and also Fourier transform. CO4 Learn the group axioms in group theory and symmetry operations along with applications. CO5 Concept of Probability, Curve fitting technique.
308	QUANTUM MECHANICS II	2022206	Employability/Entrepreneurship /Skill Development	CO1 Better understanding of the mathematical foundations of angular momentum of a system of particles. CO2 Apply the perturbation theory to scattering matrix and partial wave analysis. Compare and analyze the different approximation methods. CO3 Applications of various approximation methods in solving the Schrodinger equation. CO4 Understand the concept of Scattering cross-section, scattering amplitude of Born approximation and partial wave analysis method. CO5 Grasp the central concept and principles of relativistic Quantum Mechanics and solve problems.
309	ELECTIVE PAPER I - SPECTROSCOPY	2022207	Employability/Entrepreneurship /Skill Development	CO1 Understand the concept of Microwave Spectroscopy and analyze the spectra of diatomic, Polyatomic Molecules and Symmetric Top molecules. CO2 Infra-Red Spectroscopy and its Instrumentation technique. CO3 Account of Raman activity by Classical and Quantum theory, The structure determination of N ₂ O and SO ₂ Raman Spectroscopy. CO4 UV Spectroscopy, its origin, principle and measurement. CO5 Resonance spectroscopy - NMR, EQR and ESR. Principle behind Mossbauer spectroscopy is discussed.



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310	EXTRA DISCIPLINARY PAPER I - MICROPROCESSOR FUNDAMENTALS - 8085	2022208	Employability/Entrepreneurship /Skill Development	CO1 Write programs using the assembly language, instruction set of 8085 microprocessors. CO2 Set up programming strategies and select proper mnemonics and run their program on the trainer kits. CO3 Practice different types of programs for the same problem and verify the results. CO4 Analyze the basic concepts and programming of 8051 microcontroller. CO5 Understand the interfacing circuits for various applications of 8051 microcontroller and providing solutions to real world problems.
311	STATISTICAL MECHANICS	1922311	Employability/Entrepreneurship /Skill Development	CO1 Gain knowledge and become familiar with various thermodynamic processes. CO2 Acknowledge Hamiltonian formalism, theory of Probability and Statistics needed to obtain the laws of thermodynamics. CO3 Understand the concepts of ensembles and their connections to thermodynamic quantities. CO4 To learn the classical and quantum statistics which describes the state of a system made of microscopic particles which either obey Fermi-Dirac statistics or Bose-Einstein statistics. CO5 Value of the phase transitions and extend these ideas to quantum world. To understand phase transition arising in Ising model.
312	ELECTROMAGNETIC THEORY & PLASMA PHYSICS	1922312	Employability/Entrepreneurship /Skill Development	CO 1 Understand the foundations of electrostatics and learn to use various mathematical techniques to obtain electric field potential. CO2 Understand the foundations of magnetostatics, properties and boundary conditions obeyed by magnetic field and vector potential. CO3 Acquire knowledge to express Maxwell's equations in vector form using Faraday's laws and definition of Maxwell's displacement current and their applications. CO4 Develop knowledge about Retarded Potential. Rendering insights into fields generated by oscillating sources, and their applications. CO5 Demonstrate the ability to understand the connection between Special Theory of Relativity and Electrodynamics, and to express Electrodynamics (Maxwell's equations) in Tensor notation.
313	ELECTIVE II - MICROPROCESSOR 8086 AND MICROCONTROLLER 8051	1922313	Employability/Entrepreneurship /Skill Development	CO 1 Study the architecture of microprocessor 8085,8086. CO2 Knowledge of basics of modern computation is evident from the instruction set, addressing modes of the microprocessors (8085, 8086). CO3 Design/use microcontroller for new environments can be implemented due to the background knowledge of microcontroller architecture and real time control of 8051.CO4 Write programs in assembly language. CO5 Understand the operation of ADC, Stepper motor.
314	EXTRA DISCIPLINARY PAPER II - MATERIALS SYNTHESIS AND CHARACTERIZATION	1922314	Employability/Entrepreneurship /Skill Development	CO 1 Acquire knowledge of basic approaches to synthesize organic, inorganic, semiorganic crystals and characterize them. CO2 Demonstrate the stages of thin film formation and can outline the conditions for the formation of amorphous, crystalline and epitaxial films. CO 3 Acquire an insight into the synthesis of nano materials. CO 4 Understand the physical and chemical properties of carbon nanotubes.CO5 Assimilate the principle, construction and working knowledge of spectroscopic techniques like UV-VIS spectroscopy, luminescence techniques, X-ray, electron and neutron diffraction.



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315	CONDENSED MATTER PHYSICS	1922415	Employability/Entrepreneurship /Skill Development	CO1 Arrive at the basic elements of crystal structure of condensed matter. CO2 Conclude on the accurate description of lattice dynamics and thermal properties of crystalline solids. Derive cohesive energy of ionic crystals. CO3 Perceive origin of energy bands in solids with focus on semiconductors. CO4 Able to explain various magnetic phenomena and describe the different types of magnetic ordering (Diamagnetism, Paramagnetism, Ferromagnetism) based on the exchange interaction. CO5 Differentiate between type-I and type-II superconductors and score on the theoretical explanation of super conductivity viz Cooper pairs and BCS theory.
316	NUCLEAR AND PARTICLE PHYSICS	1922416	Employability/Skill Development	CO1 Acquire knowledge of nuclear models along with their defining features and drawbacks. CO2 Concept and nature of nuclear force. Attain the knowledge in nuclear interactions. CO3 Derive nuclear reaction kinematics, identify types of reactions and conservation laws. CO4 Remember the concepts of nuclear decay. CO5 Understand the nature, interaction etc. of the elementary particles.
317	ELECTIVE III - COMPUTATIONAL METHODS AND C PROGRAMMING	1922417	Employability/Entrepreneurship /Skill Development	CO1 Learn to solve simultaneous linear equations using C program. CO2 Solve differential equations using C program. CO3 Apply computational methods to solve problems in physics, including data analysis such as linear and nonlinear fits to data sets. CO4 Solve interpolation using C program. CO5 Integrate functions using Euler and Runge-Kutta Methods with the help of C program,
M.SC., BIOCHEMISTRY - 24				
318	BIOMOLECULES	2024101	Employability	CO1 List the facts and milestone discoveries, key contributions of scientists that led to the establishment of Biochemistry as a separate discipline CO2 Classify and explain the structure, biological importance and physico chemical properties of carbohydrates, from monosaccharides to polysaccharides, relate the importance of sugar derivatives and bacterial cell wall polysaccharides CO3 Identify the structure of amino acids, classify proteins, explain their properties and relate the structural levels of organization of proteins CO4 Describe the tertiary, quaternary structure, forces stabilizing the structure of proteins and explain the chemical synthesis of peptide CO5 Illustrate the structure of nucleotides, distinguish DNA and RNA and describe the structure of DNA, its properties, types of RNA and their biological functions CO6 Define and classify lipids with examples, explain the properties of fats and describe the structure and biological functions of phospholipid. nterface the processor to exter



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319	INTERMEDIARY METABOLISM	2024102	Employability/Skill Development	<p>CO1 1. Define metabolism, acquire a wide knowledge on the metabolism of the glucose and identify the steps involved in biochemical pathways that produce ATP such as glycolysis, TCA cycle, ETC.</p> <p>CO2 2. Explain the oxidation and synthesis of fatty acids, identify the steps involved in metabolism of cholesterol, synthesis of prostaglandins, leukotrienes and thromboxanes.</p> <p>CO3 ExplaiHow biochemical energy is generated in cells using principles of thermodynamics (free energy enthalpy) using coupled reactions to show how an endergonic reaction can occur by coupling with exergonic reaction</p> <p>CO4 3. Gain knowledge on synthesis of urea and other biologically important amines.</p> <p>CO5 1. Write the chemical reactions for the individual steps in the purine and pyrimidine metabolism.</p>
320	PLANT BIOCHEMISTRY	2024103	Employability/Entrepreneurship	<p>CO1 Summarize Photosynthesis</p> <p>CO2 Classify Plant Hormones And Explain Their Functions</p> <p>CO3 Discuss Secondary Metabolites In Plants</p> <p>CO4 Illustrate Nitrogen Fixation By Symbiosis Biochemistry Of Nitrogen Fixation</p> <p>CO5 Evaluate The Anti Oxidant Defense In Plants</p> <p>CO6 Distinguish Between Types of Stress Tolerance in plants</p>



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321	ENZYMES	2024104	Employability/Skill Development	<p>CO1 Gain knowledge in relevant principles of enzyme, mechanism of enzyme kinetics, enzyme catalysis emphasizes on capability of the students to work in a group and gather the information.</p> <p>CO2 Students will be familiarized with the terms such as activation energy, Lock and key theory and induced fit theory.</p> <p>Graduates get the knowledge of regulation of enzyme activity and its types can be able to apply in higher education. Distinguish the mechanism of action of specific enzymes such as chymotrypsin, carboxypeptidase, ribonuclease, lysoenzyme, abzymes and ribozymes</p> <p>CO3 Analyse and interpret the graphs based on kinetics data. Identification of Enzyme specificity of unknown samples using MM- Equation or by LB plot.</p> <p>CO4 Differentiation of enzyme catalysis by acid base, covalent metal ion and proximity orientation and coenzymes in enzyme catalysis shows the platform on the nature of enzymes.</p> <p>CO5 Comprehend the various methods for production, purification, characterizatiostem.</p> <p>ect and shine in all the fields</p> <p>plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule</p>
322	MEMBRANE BIOCHEMISTRY	2024105A	Employability/Skill Development	<p>CO1 Describe the structure and function of membranes, and illustrate the structure of phospholipid and membrane bilayer.</p> <p>Apply knowledge of liposomes in drug delivery and justify how Cell to Cell Communication occurs.</p> <p>CO2 Classify the presence of different in RBC membrane.</p> <p>Describe the consequence of damage occurs in RBC membrane and be able to understand the diseases caused due to its mutations.</p> <p>CO3 Distinguish between passive and active transport; explain how substances are directly transported across a membrane.</p> <p>Describe the primary mechanisms by which cells import and export macromolecules.</p> <p>CO4 Identify the main components of a signal transduction pathway</p> <p>Differentiate between different types of signals. Describe how a cell propagates and responds to signal.</p> <p>CO5 Classify the type of molecules whose diffusion is restricted by membranes.</p>



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323	PHYTOMEDICINE	2024105 B	Employability/Skill Development	CO1 Gain a wide knowledge on plants and the phytochemicals present in plants CO2 Perform the qualitative, GC analysis and HPLC analysis of various phytoconstituents CO3 Understand Indian systems of medicine CO4 Classify hormones and their biological role CO5 Interpret the clinical features of diabetes mellitus, insipidus. Acquire knowledge on disorders of adrenocortical hormones.
324	STEM CELL BIOLOGY	2024105 C	Employability/Entrepreneurship /Skill Development	CO1 Define the significance of stem cells CO2 Illustrate the differentiation of stem cells CO3 Understand techniques used for stem cell characterization CO4 Analyze the therapeutic applications of stem cell CO5 Describe the importance of Stem cell banking



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325	ANALYTICAL BIOCHEMISTRY	2024106	Employability/Entrepreneurship /Skill Development	<p>CO1 Analyze and apply the methodology involved in organ and tissue slice, homogenization techniques. Perform cell sorting and cell counting.</p> <p>CO2 The students will know the structure of atoms and molecules. The larger the number of wavelength emitted by these system makes it possible to investigate their structure in detail including electronic configuration of ground and various excited state and also biochemical assay of macromolecules Advanced knowledge on the interactions of electromagnetic radiation and matter and their applications in spectroscopy Analyze and interpret spectroscopic data collected by the methods Assay of biomolecules (Carbohydrates, Cholesterol, Protein, Enzymes) using UV spectroscopy Estimate the amount of vitamins using spectrofluorimetry Interpret the molecular weight of compounds using mass spectra</p> <p>CO3 To learn various techniques of product purification and design purification strategy based on product characterized and cost effectiveness Obtaining analytical skstem.</p> <p>ect and shine in all the fields plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule and control project activities</p> <p>listener, place, time, use, premise, fact, residue, object, field, etc., to be incorporated and used.து இயல்களுக்கும் பொதுவான செய்திகள் அனைத்தும் இவ்வியலில் கூறப்படுகிறது. குறிப்பாக அகப்பாட்டு உறுப்புக்களான கூற</p>
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326	HUMAN PHYSIOLOGY & NUTRITION	2024107	Employability/Skill Development	<p>CO1 Gaining a complete knowledge in the physiology of life. Classify blood groups so as to identify the blood groups of patients and donors for the purpose of safe blood transfusion. Exposure to the nature and types of blood cells, blood groups, lymphatic system</p> <p>CO2 Acquire knowledge on morphology of lungs, types of respiration, mechanism of gaseous exchange, role of hemoglobin, chloride shift and bohr effect.</p> <p>CO3 gain knowledge on morphology and functions of kidney, structure of nephron , mechanism of mechanism of urine formation, Structure and functions of neuron, neuro transmitters, Mechanism of nerve impulse transmission</p> <p>CO4 Realizing the fact that “Food as medicine” Cognizance of basic food groups viz. Carbohydrates, proteins and lipids and their nutritional aspects as well as calorific value</p> <p>CO5 A wide exposure to the classification and biological significance vitamins and minerals present in food</p>
327	MOLECULAR BIOLOGY	2024108	Employability/Skill Development	<p>CO1 Infer the central dogma of molecular biology and show that DNA is the genetic material through experimental evidence Compare and contrast the replication process in prokaryotes and eukaryotes and explain the events, enzymology, fidelity, inhibitors and regulation</p> <p>CO2 Categorize DNA repair mechanisms, define mutation and list its types</p> <p>CO3 Summarize the process of prokaryotic and eukaryotic transcription</p> <p>CO4 Define genetic code, list its characteristics, relate genetic code to translation process and explain protein biosynthesis</p> <p>CO5 Interpret the regulation of gene expression in prokaryotes using lac and trp operon</p>
328	BIOTECHNOLOGY	2024209 A	Employability/Entrepreneurship /Skill Development	<p>CO1 Demonstrate the basic and recent techniques applied in the field of Biotechnology</p> <p>CO2 Describe gene therapy and gain knowledge related to production of pharmaceutically important products</p> <p>CO3 Apply the basic rDNA technique to produce transgenic animal, discuss gene transfer methods, their application in pharmaceutical industry, cloning and its importance</p> <p>CO4 Interpret the principles and technical advances behind the in vitro culture of plant cells and Design plant related rDNA techniques</p> <p>CO5 Discuss the basic requirements and tools employed in genetic engineering process.</p>



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329	ECOLOGY & POPULATION EDUCATION	2024209 B	Employability/Skill Development	<p>CO1 Discuss the concepts of ecology and the significant role of species in the environment</p> <p>CO2 Discuss the negative impact of Humans behavior on environment. Identify and classify the Biogeographical zones of India</p> <p>CO3 Present their views about biodiversity and justify their roles in conservation of biodiversity.</p> <p>CO4 Explore the needs of Population Education and the impact of population growth in the society</p> <p>CO5 Calculate the population rate</p> <p>CO6 Identify and classify populated regions.</p>
330	MICROBIOLOGY	2024209 C	Employability/Entrepreneurship	<p>CO1 Able to describe basic structure of bacteria, fungi, algae and protozoa and their biological importance to mankind.</p> <p>CO2 Analyze and interpret sequence data to determine if horizontal gene transfer has occurred.</p> <p>CO3 Students can isolate, identify and characterize any microorganisms in the given environment. Acquire knowledge and lab skills to perform pathological sample.</p> <p>CO4 Graduates acquire, invent and practice, the theories and principles of food microbiology in current worldwide issues. Apply their skills in formulating the fermented foods and in food processing technology.</p> <p>CO5 They are potential to design bioreactors, rationale in medium formulation and appreciate the different types of fermentation process.</p> <p>CO6 Evaluate the present worth on waste management in water resources and to recycle the solid and liquid waste.</p>
331	BIOETHICS, IPR & HR	2024210A	Employability/Skill Development	<p>CO1 Outline International Instruments On Human Rights</p> <p>CO2 Compare The Powers And Functions Of SHRC AND NHRC</p> <p>CO3 Valuate The Moral Sentiments Of Adamsmith And Thiruvalluvar</p> <p>CO4 Analyze The Bioethics Of Cloning And Recombinant Drugs Production</p> <p>CO5 Apply Article 21 In Different Case Studies And IPR and IPP.</p> <p>CO6 Prioritize Biosafety Measures From Biohazards.</p>

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332	ORGANIZATION BEHAVIOUR	2024210 B	Employability	CO1 Understand the evolution of an organization and its important components CO2 Analyse and effectively manage individual behavior in an organization CO3 Analyse and effectively manage group behavior in an organization CO4 Understand and appreciate the organization variables such structure , culture, change and creativity CO5 Develop leadership styles to handle management stress in diverse organisations CO6 Understand the nuances and critical contributions of trained personnel in the health care organisations
333	GOOD LAB PRACTICES	2024210 C	Employability/Entrepreneurship /Skill Development	CO1 Understand the fundamental points of good laboratory practices CO2 Handle laboratory animals with care CO3 Acquire knowledge on the protocols need to be followed CO4 Analyze the biosafety of GM foods CO5 Gain the Awareness of HACCP and, follow the Safety measures in Industrial Hygiene.
334	ADVANCED CLINICAL BIOCHEMISTRY	1924313	Employability/Entrepreneurship /Skill Development	Become clinical researcher , clinical Trials and related documentation preparation personnel. Become Entrepreneurs by setting up their own clinical laboratories.
335	BIOSTATISTICS	1924314	Employability/Skill Development	Develop the problem-solving skills which will enable independent practice as a specialist. Develop related transferable skills such as correct use of statistics Carry out clinical correlations in a better way.
336	MICROBIOLOGY	1924315	Employability/Entrepreneurship /Skill Development	understand the concept of recombination, elucidate gene transfer mechanisms Understand the host microbe interaction in and knowledge can be employed in health and disease sector. Set up small scale industries related to dairy products.
337	HORMONAL BIOCHEMISTRY	1924316	Employability	Apply the knowledge in assessing hormonal levels during lab diagnostics. Develop professional competencies of medical graduates in allied areas to understand the pathophysiology, investigation and management of endocrine disorders



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338	BIOINFORMATICS	1924317	Skill Development	Search large databases, interpret their results during higher studies. Analyze gene expression data from microarrays or RNA sequencing in lifescience related jobs. Perform alignment using different alignment tools and interpret it in study of evolution.
339	IMMUNOLOGY	1924418	Employability/Entrepreneurship /Skill Development	Understanding of the overview of immune system including cells, organs and vaccines. Expertise in testing Immunological kits. carry out and analyze tests on patients with a range of immune system disorders.
340	BIOREMEDIATION	1924420	Employability/Skill Development	Acquire skills on techniques involved in bioremediation Understand the concept of bioremediation to handle environmental toxins. Analyze the harmful effects of waste water disposal to the environment and the biotechnological solutions.
341	LIFE STYLE DISEASE AND PREVENTION	1924420	Employability/Skill Development	Understand that it is possible to improve general health through lifestyle changes Understand different lifestyle disorders, Make healthy food choices. Adopt healthy lifestyle practices.
M.SC., BIOTECHNOLOGY - 25				
342	BIOCHEMISTRY	2025101	Employability, Skill Development	Classify and analyze the structure, composition and function of biomolecules and gain knowledge on the acidity and alkalinity of the biological buffer systems; able to apply the principles of thermodynamics in the reactions involving high energy compounds. Illustrate the metabolic pathways of macromolecules such as carbohydrates. Sketch the metabolic pathway of fatty acids and the structure of biological membrane and summarize the transport of ions across the membrane. Integrate the synthesis and degradation of protein metabolism and gain insights on the cell signaling pathways and hormonal regulation of mammalian metabolism. Discuss the metabolism of nucleic acids and recommend the type of analytical technique for the separation and purification of biomolecules
343	MOLECULAR CELL BIOLOGY	2025102	Employability, Skill Development	Determine the structure of cell organelles and biomolecules and discuss the dynamics of cell components. Demonstrate the different kinds of microscopy, hybridization techniques and DNA microarray. Revise the structure and functions of Nucleic acids & genome organization. Explain the replication, regulation, signaling and pathways of eukaryotic cell. Discuss the regulation of cell cycle check points and compare the genes involved in cancer.



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344	MICROBIOLOGY	2025103	Employability, Skill Development	Understand the historical perspective of modern microbiology and describe the morphological features of prokaryotic and eukaryotic cells. Identify and compare the applications of various microscopic techniques. Compare the effectiveness of moist heat, dry heat, filtration on controlling the microbial growth. Describe the mechanism of action of various antimicrobial agents against different microorganisms. Able to identify the virulence factor that contributes to the pathogenicity of various microorganisms. Correlate the beneficial and harmful effects of different types of microbes for the human mankind
345	IMMUNOLOGY & IMMUNOTECHNOLOGY	2025104	Employability	Classify different types of immunity, cells and lymphoid organs and their protective role in immune system. Outline the properties of antigens and antibody, and theories of antibody formation. Explain the pathways of complement system. Apply concepts of Hybridoma technology for the production of monoclonal antibody. Gain insights on cell mediated and antibody mediated immune response, different methods of extraction and purification of antigens and antibodies. Exhibit knowledge in immune specific diseases- Hypersensitivity and auto immunity. Understand the immune response produced in tumors and transplantation. Enumerate the various immunological techniques and its applications. Debate the importance of vaccines technology over the current trend of vaccine production.
346	MOLECULAR GENETICS	2025105(A)	Employability, Skill Development	Analyze the structure and functional aspects of genes and their contribution in evolution of genomes and to identify the DNA as the genetic material. To acquire a strong foundation of Mendelian genetics and the laws of Mendelian inheritance and solve basic Mendelian and non - Mendelian genetics problems. Assess the strength of mutations in genetic evolution and to identify the correlation between mutagenesis and carcinogenesis. Explain the significance of transposons in evolution and the fundamental aspects of plasmids that enable their exploitation in genetic engineering strategies. Explain the significance of transposons in evolution and the fundamental aspects of plasmids that enable their exploitation in genetic engineering strategies.
347	ECOLOGY, EVOLUTION AND BEHAVIOR	2025105(B)	Employability, Entrepreneurship, Skill Development	Discuss the concepts of ecology and its resource partitions. Explicate the various species interaction in all levels of species diversity. Compare the types of ecological succession, food web and food pyramids and analyze the case studies on conservation of ecosystem. Elaborate the concepts in theories of evolution and evolutionary timeline by constructing timeline maps of eras and justify the importance of various theories of evolutionary processes. Adapt to the social community by developing communication & social skills that are essential to be a part of society.



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348	DEVELOPMENTAL BIOLOGY	2025105(C)	Employability	To read the early embryonic development and molecular recognition. To illustrate cell to cell communications, interactions and signal transduction pathway for the development of embryonic cells. To illustrate cell to cell communications, interactions and signal transduction pathway for the development of embryonic cells. To analyze the structure of embryonic development and the molecules involved. To compare the development and developmental disorders of vertebrates. To identify the maternal effect of gene in drosophila and hormonal control in amphibians.
349	ANIMAL BIOTECHNOLOGY	2025206	Employability, Entrepreneurship, Skill Development	Acquire theoretical knowledge required to handle and work with animal cells in culture, media preparation and methodology used to obtain primary and established cell lines. Predict the methods used for the characterization of cell lines such as karyotyping, cell counting and viability assays. Differentiate the various methods used for cell separation and to understand the technology of cryopreservation. Describe the methodology involved in the transgenesis and the applications of transgenic animals. Acquire a deeper understanding of the applications of animal cell culture to human health and improvement and the strategies related to the ethics of animal cell lines.
350	PLANT BIOTECHNOLOGY	2025207	Employability, Entrepreneurship, Skill Development	Outline the history of plant biotechnology and state its importance during the different stages of plant development and Recollect the role of phyto hormones in plants. Learn in-depth the basic techniques of plant tissue culture and its application. Develop molecular technique skills in plant tissue culture using Ti plasmid vectors in agrobacterium and able to gain insights on various polymorphism techniques. Elaborate the development of transgenic plants and its application in production of vaccine, drugs and protein
351	ENVIRONMENTAL BIOTECHNOLOGY	2025208	Employability	Perceive the role of biotechnology in environment protection and relate natural biogeochemical cycles with current environmental changes. Categorize various air pollutants and explain their effects on environment, human and other biotic communities . Illustrate reactor types and can explain its functioning along with its applications in industries. Elaborate the role of denitrifying bacteria in maintaining environmental balance and justify their role in waste water treatment process. Develop skills to utilize kinetics in successful industrial processes such as biofilm formation and special case biofilms. Explain various biomass generated and its role in energy production.
352	PHARMACEUTICAL BIOTECHNOLOGY	2025209	Employability, Entrepreneurship, Skill Development	Analyze the various types of drugs and its applications. Demonstrate with pharmacokinetics and pharmacodynamics parameters of biopharmaceutical. Exhibit knowledge in formulation and delivery of drugs. Enumerate the various sources of biopharmaceuticals and its application. Comprehend the therapeutic value of biosimilar drugs . Illustrate the drug discovery process and pre-clinical studies of various therapeutic products.



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353	FORENSIC SCIENCE	2025210(A)	Employability, Skill Development	Outline the background of the development of Forensic science and elaborate on the advancements in the development of this technology in India. Describe the biological basis and fundamental principles of fingerprinting and the consecutive steps used for detection, preservation and enhancement of fingerprints. Predict the chromatographic and spectroscopic methods used for sample preparation in forensics. Compare the role of narcotics and other drugs in forensic applications and the methods used for identifying and maintaining individual identity. Analyze the significance of collecting biological evidences and social, legal and ethical concerns that can be solved using forensic science.
354	MARINE BIOTECHNOLOGY	2025210(B)	Employability	Identify and to correlate the significance of marine biota to humans in biotechnological perspective and to describe optimal methods available for their invitro culture and maintenance. Effectively explain the strategies adopted for enhancing the culture of specific marine organisms and the genetic approaches used for manipulating growth, reproduction and disease resistance in aquaculture. Define the major pollutants and to critically think to evaluate the human impact on marine ecosystems and the influence of marine organisms in cycling of bioelements. Develop competency for careers associated with research and development in marine related bioproducts, of advanced scope in pharmaceutical industry and in medical research. Elaborate on biofouling, problems posed by marine biofouling and the biotechnological approaches used for their control.
355	DNA BARCODING TECHNOLOGY	2025210(C)	Employability, Skill Development	Explain the history of DNA barcoding and criticize the significance of the field with respect to conventional and older identification methods. Outline the characters of DNA responsible for identifying organisms and distinguish the role of mitochondrial, chloroplast and nuclear DNA in identification. Elaborate the DNA barcodes used in identifying different types of organisms such as bacteria, fungi, plants and animals. Choose and construct a work flow for DNA barcoding by using series of molecular biological techniques. Utilize the bioinformatics tool to compare and assess the results of DNA barcode sequencing in order to identify an organism.
356	ANIMAL AND PLANT PHYSIOLOGY	2025211(A)	Employability	Gain insights on components of cardio vascular system such as blood and blood groups. Explain the structure and conduction of heart and also the importance of hormones in humans. Describe the structure and understand the mechanism of digestive, respiratory and excretory system. Acquire knowledge on the structure and functions of skeletal, muscular Describe the structure of nervous system and understand the mechanism of nerve impulse transmission. Enumerate the process of photosynthesis, electron transport chain and CO ₂ fixation in plants and illustrate the synthesis, storage, transport and action of plant hormones. Demonstrate the importance of phytochrome, cryptochrome, phototropin in solute uptake, transport and translocation and stress physiology of plants



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357	CLINICAL TRIALS	2025211(B)	Employability, Skill Development	Discuss Clinical trials: Study of various clinical trials. Enumerate New drug discovery process in clinical trials. Exhibit knowledge in Various regulatory requirements in clinical trials. Explain Pre-clinical toxicology. Explore Basic terminology used in clinical research
358	STEM CELL BIOLOGY	2025211(C)	Employability, Skill Development	Predict the formation of stem cells, their isolation and invitro maintenance and to differentiate the potential of embryonic stem cells with adult stem cells. Demonstrate the properties and differentiation of stem cells. Helps to understand the epigenetic regulation of stem cells, Gain insights into the techniques involved in isolation, expansion and characterization of stem cells. Evaluate the role of stem cells in clinical application and to design research strategies for disease control and prevention.. Acquire a deeper understanding of the ethical, legal and social concerns of Stem cell research and its applications to human health and improvement.
359	GENETIC ENGINEERING -	2025210	Employability, Entrepreneurship, Skill Development	Students will be able to understand about cloning vectors, DNA amplification techniques, screening techniques for identifying recombinants, transfer of recombinants to host cells used in genetic engineering technology
360	BIOPROCESS TECHNOLOGY	1925316	Employability, Skill Development	Students will be able to gain knowledge in the role of microbial enzymes and various fermentors used in industrial processes, role of microbes in degradation of toxins and utilization of microbes as biofertilizers
361	BIOINFORMATICS	2025211	Employability, Skill Development	Students will be able to understand about various nucleotide, protein databases, steps in retrieving and analyzing information from databases to understand about an organism or biological molecule.
362	ENZYMES & ENZYME TECHNOLOGY	2025317	Employability, Entrepreneurship, Skill Development	The subject will be able to understand the kinetics and mechanism of enzyme action, enzyme structure and its kinetics.
363	ELECTIVE PAPER 4A-ADVANCED MOLECULAR TECHNIQUES	1925320	Employability, Skill Development	The content implies the importance and applications of various molecular techniques in field of science and technology.
364	NANO BIOTECHNOLOGY	1925321	Employability, Skill Development	To gain knowledge about the various process of nanoparticles synthesis and its applications in biological field.
365	TISSUE ENGINEERING	1925424	Employability, Skill Development	The subject will help the students understand the making of invitro tissues/organs.
366	RESEARCH METHODOLOGY, BIOETHICS& BIOSTATISTICS	1925423	Employability, Skill Development	The subject will be able to understand the need for research and train them the bioethical research. It even develops to use contemporary applications of epidemiological and statistical methods.
367	HERBAL TECHNOLOGY	1925322	Employability, Entrepreneurship, Skill Development	Provide the understanding about the medicinal properties, applications and development of herbal drugs
M.SC., MICROBIOLOGY - 26				



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368	FUNDAMENTALS OF MICROBIOLOGY AND MICROBIAL PHYSIOLOGY	2026101	Employability	<p>Emphasize the Principles of Classification, rules and its applications in Microbial taxonomy.</p> <p>Be acquainted with knowledge of bacterial cell structure, Staining methods, the nutritional requirements of bacteria and get equipped with various methods of bacterial growth measurement.</p> <p>Understand the Principles of sterilization and disinfection, various physical and chemical means of sterilization, and evaluation of disinfectants. Master aseptic techniques and able to perform routine culture handling tasks safely and effectively</p> <p>Acquire an in-depth study of the concepts of metabolism, the different pathways of energy conservation microbial metabolism and anaerobic respiration.</p> <p>Perceive significant knowledge of the nature of photosynthesis — enlisting differences in photosystem of plants, algae, cyanobacteria.</p> <p>Handle basic instruments – Autoclave, laminar air flow, incubator, pH meter, colorimeter used for the cultivation of bacteria.</p> <p>Understand the principle and operation of different types of microscopes and thestem.</p> <p>interface the processor to external devices. Evaluate assembly language programs</p>
369	MEDICAL MICROBIOLOGY - I	2026102	Employability, Entrepreneurship	<p>Understand the importance of normal flora of human body and acquire knowledge on the process of infectious disease</p> <p>Acquire the basic concepts of medical microbiology and analyze how pathogenic organisms causes the disease on human beings and animals</p> <p>To compile a list of disease causing bacteria and compare their modes of infection, symptoms, diagnosis and treatment</p> <p>Evaluate the role of pathogenic bacteria in human infections pertaining to respiratory tract, gastrointestinal tract, urinary tract, skin and soft tissue</p> <p>Comprehend human-fungal interaction, which can be applied to obtain in-depth knowledge on fungal diseases and the mechanism behind the disease process</p> <p>Review medically important fungi that cause disease and methods of identification for respective fungi from clinical specimens</p> <p>Explain types of mycoses caused in humans and demonstrate their modes of infection, pathogenesis, and treatment with introduction to mycotoxins</p>



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370	BASICS IN IMMUNOLOGY AND IMMUNOTECHNOLOGY	2026103	Employability, Skill Development	<p>Analyze various cells involved in Immune system and their response in humoral and cell mediated immunity and discuss ABO & Rh incompatibility.</p> <p>Explore different type of foreign bodies and various classes of antibodies involving in antigen antibody reactions. Classify vaccines and approaches to new vaccines.</p> <p>Standardize bacterial antigens and elucidate the purification of mono, polyclonal antibodies using recent and modern techniques for diagnostic Immunology.</p> <p>Illustrate various mechanisms in tissue and organ transplantation and to regulate immune response against tumor antigens.</p> <p>Exemplify the effect of immune reactions in Hypersensitivity and Immunodeficiency diseases.</p> <p>Decode the role of Immunology in Auto immune diseases and disorders.</p>
371	MOLECULAR BIOLOGY AND MICROBIAL GENETICS	2026104	Employability, Skill Development	<p>Understand the concept of central dogma of molecular biology.</p> <p>Describe the structure and function of DNA and RNA in a cell and have a conceptual knowledge about DNA as a genetic material.</p> <p>Discuss the molecular mechanisms underlying mutations, DNA damage and repair mechanisms.</p> <p>Comprehend the various gene transfer methods and its applications.</p> <p>Understand the molecular mechanisms involved in transcription and translation and compare and contrast the prokaryotic and eukaryotic RNA and protein synthesis.</p> <p>Describe the importance of genetic code and concept of gene regulation with reference to operon.</p> <p>Understand and apply the principles and techniques of molecular biology for further education and employment.</p>
372	BIOINFORMATICS	2026105 (A)	Employability, Entrepreneurship, Skill Development	<p>Comprehend the basic concepts and the significance of Biological data analysis.</p> <p>Compute Sequence submission and retrieval tools</p> <p>Understand the basics of sequence alignment, algorithms and tools used for Phylogenetic Analysis</p> <p>Evaluate the computational methods, tools and algorithms employed for Biological Data Interpretation. High-throughput Gene expression data analysis from microarray</p> <p>Effective Implementation of existing software tools to predict and understand the intersection of secondary protein structure and genome</p> <p>Retrieve information from available databases and use them for microbial identifications and drug designing.</p> <p>To impart knowledge about various concepts, advanced technical tools in docking, QSAR studies employed in computational drug discovery.</p> <p>Analyse ADME response to drug response and its effect</p>



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373	CELL BIOLOGY	2026105(B)	Employability	Analyse the basic concepts and theories of cell and reveal the similarities and differences of prokaryotic and eukaryotic cell Compare and contrast cell wall of bacteria and fungi. Discuss intra and extra plasmic cell inclusions Clarify and discuss various cell components and their significance Manifest the role of chromosomes and its functions and express the synthesis and regulations of proteins Resolve the role and significance of cell cycle and cell divisions in amitosis, mitosis and meiosis. Reveal cancer, aging and stem cells
374	FORENSIC BIOLOGY	2026105 (C)	Employability, Entrepreneurship, Skill Development	Discuss the history & development of forensic science and predict the scope as well as need for forensic sciences in the society Explain the basic principles of forensic science including definitions used and concepts in forensic science Evaluate the importance of biological evidences including microorganisms, hair and samples which are biological in nature Compile list of toxins and poisonous chemicals, symptoms and antidotes, evaluate alcohol levels in biological samples using immunoassays Acquire knowledge on the application of various biological fluids as forensic evidences Carry out molecular techniques for forensic analyses to solve crimes and paternal disputes
375	FOOD, DAIRY AND INDUSTRIAL MICROBIOLOGY	2026207	Employability, Entrepreneurship	Know the spoilage mechanisms in foods and thus identify ways to control deterioration and spoilage. Apply principles involving various methods of food preservation and microbiological quality control programmes in food production and prevention of food-borne infections Understand the beneficial role of microorganisms in fermented foods and in food processing and the microbiology of different types of fermented food products Realize the importance of microflora of milk and milk products, and the role of microorganisms in the fermentation and processing of milk Be acquainted with fermentation protocols for production of microbial production of organic acids, vitamins, amino acid Build knowledge with the basics of food safety regulations, food control agencies, quality assurance programs FDA, HACCP, BIS, FSSAI, Gain knowledge about food adulteration and common food additives



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376	MEDICAL MICROBIOLOGY - II	2026208	Employability, Skill Development	<p>Gain knowledge about host parasite relationship and demonstrate the techniques, which are used to identify the parasites</p> <p>Discuss about various parasitic infections, pathogenicity and diagnosis</p> <p>Explain the mode of action of drugs used against parasitic infection</p> <p>Revise the general properties and classification of viruses</p> <p>Predict viral infections based on serological analysis</p> <p>Assess the methods used for enumeration and quantification of virus from clinical specimens</p> <p>Compare and distinguish the replication strategies of commonly occurring viruses</p>
377	RESEARCH METHODOLOGY AND BIOSTATISTICS	2026209	Employability, Entrepreneurship, Skill Development	<p>Understand basics of research, importance of literature, and constraints before design of a research, review or synopsis presentation</p> <p>Explain different types of data and outline the techniques of data collection</p> <p>Identify the importance of sampling, its types, and variables. Outline of report preparation and ethics of plagiarism</p> <p>Assess and understand the basics statistical terminologies used in biostatistics</p> <p>Gather knowledge on different type of statistical analyses and tests for analyzing biological data</p> <p>Empirical model building for prediction using biological data</p>
378	ENVIRONMENTAL MICROBIOLOGY	2026210 (A)	Employability, Entrepreneurship	<p>Pronounce major habitats found on Earth's ecosystems and escalate the superiority of these ecosystems to humans, animals and plants.</p> <p>Designate the associations among predator and prey populations and outline the structure of food webs and trace the flow of energy through an ecosystem.</p> <p>Illustrate the diversity of microorganisms in air and its significance and exemplify the air quality in Indian cities-mapping of the hot spots and explore the impact of air borne microbes.</p> <p>Express the role of indicative microorganisms and to apply knowledge in water quality analysis and in designing blueprint for drinking water treatment.</p> <p>Interpret waste water and solid waste management and commentate the microbiology of xenobiotics in the environment.</p> <p>Manifest the major environmental changes revealing with Global warming, Green house effect and Ozone depletion and Express the management of e-waste.</p>



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379	TISSUE BIOTECHNOLOGY	2026210 (B)	Employability, Entrepreneurship	<p>Gain fundamental knowledge in principles, practices and application of animal and plant tissue biotechnology.</p> <p>Acquire the knowledge about the techniques, laboratory organization and measures adopted for maintenance of aseptic condition.</p> <p>Explain the fundamental scientific principles that underlie cell culture and its nutritional requirements.</p> <p>Share insights in callus culture, cell suspension culture, and organ micro-culture, plant micro-propagation, and somatic embryogenesis.</p> <p>Aware on isolation and maintenance of animal cells culture developed from embryonic organs, whole embryo and adult organs.</p> <p>Discuss the benefits of cloning and hybridoma technology in the field of applied life science.</p> <p>Explore the various applications of tissue biotechnology pertaining to Drug Designing and Drug Therapy</p>
380	MARINE BIOTECHNOLOGY	2026210(C)	Employability, Skill Development	<p>Understand the concept of marine ecology and diversity and interpret the microbial association with coral and sponge</p> <p>Analyze various biogeochemical cycles of marine environment and pointout the microbes involved</p> <p>Manifest the role of extremophiles in marine environment and reveal about microbial bioluminescence</p> <p>Illustrate the microbial indicators of marine pollution and expound microbial contamination and control in sea food</p> <p>Explore bioactive compounds of marine microbes and analyze bioremediation of heavy metals and oil pollutants</p>
381	POULTRY FARMING	2026211 (A)	Employability, Entrepreneurship, Skill Development	<p>Relate the phylogeny of different poultry species and describe the design and types of poultry houses</p> <p>Clarify the various types controlled process to maintain poultry houses</p> <p>Compare and contrast the nutrient requirement of poultry species with BIS and NRC of USA. Express various essential nutrition and their functions required in poultry</p> <p>Manifest the role of bacterial, viral, fungal and parasitic infections involved in poultry and expound metabolic and nutritional deficiency diseases and disorders</p> <p>Explicate various sanitation and hygiene management practices in poultry houses</p> <p>Point out economic principles and marketing approaches of poultry products for import and exports and decode the role of insurance and finance management in poultry enterprises</p>



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382	APICULTURE	2026211(B)	Employability, Entrepreneurship	<p>Understand the systematic position and life history of honey bee</p> <p>Reveal the different stages and types of bee and discuss about the the cure and management of apiculture</p> <p>Describe the practice of bee rearing process and analyse instruments employed in apiary</p> <p>Compare and contrast the composition of honey and bee wax and interpret the yield in National and international markets</p> <p>Clarify the proposal for financial assistance and funding agencies and reveal the modern methods employed in artificial bee hives</p>
383	NUTRITION AND DIETETICS	2026211(C)	Employability, Skill Development	<p>Understand the correlation analysis between proteins, carbohydrates, fats and health</p> <p>Gain knowledge regarding vitamins and major elements</p> <p>To implement strategies for diet preparation for different age groups</p> <p>To compare and contrast various nutritional disorders</p> <p>To familiarize with various food safety and hygiene practices</p>
384	BIOINSTRUMENTATION	1926317	Employability	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •Examine the significance of advanced biochemical instrumentation techniques in modern research and their applications by learning about the concepts, applications, benefits, and limitations of typical biological lab tools. •To understand various molecular spectroscopy's concepts, principles, instruments, operations, and applications in biomedical sciences. •Improve the ability to carry out research activities by learning basic and advanced chromatographic purification processes, gel electrophoresis.
385	RECOMBINANT DNA TECHNOLOGY	1926318	Employability, Skill Development	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •Validate knowledge of genetic engineering tools and techniques, as well as the usage of various cloning vectors and understand the fundamentals and concepts of rDNA cloning techniques. Learn about the many ways of gene transfer. •Educate advanced molecular techniques like DNA finger printing, RFLP and their biological applications to meet international standards.
386	ENVIRONMENTAL MICROBIOLOGY	1926319	Employability, Entrepreneurship	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •To develop entrepreneurial skills in the field of water purification and desalination. •To acquire technical knowledge on waste water management and treatment.
387	BIOPROCESS TECHNOLOGY	1926320	Employability, Skill Development	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •To develop skills on various upstream and downstream processes. •To understand the implementation of various techniques in bioprocess industries.



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388	NANOBIOTECHNOLOGY	1926321	Employability, Skill Development	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •Understand the interactions between biomolecules and nanoparticle surfaces, as well as their applications, by learning about the many methods of nanoparticle creation, including physical, chemical, and biological processes. •Gain a solid understanding of the principles of a variety of physical and chemical characterization techniques.
389	MICROBIAL PRODUCTS	1926423	Employability, Entrepreneurship	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •To boost entrepreneurial skills in developing various economically important products from microorganisms. •To gain an understanding in various quality assurance concepts.
390	BIOSAFETY AND CLINICAL RESEARCH	1926424	Employability, Entrepreneurship, Skill Development	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •Develop knowledge on laboratory risks and implementation of biosafety procedures. •To independently execute bioassay techniques for biotherapeutics, nutraceutical products, vaccines and antibiotics.
391	BIOFERTILIZER TECHNOLOGY AND ORGANIC FARMING	1926425	Employability, Entrepreneurship, Skill Development	<p>At the end of the course, the student will be able</p> <ul style="list-style-type: none"> •To develop techniques for mass production of biofertilizers. •To create awareness on organic farming and provide a platform to become an successful entrepreneur. •To familiarize various schemes and funding agencies.
MSC., COMPUTER SCIENCE - 27				
395	DESIGN AND ANALYSIS OF ALGORITHMS	2027101	Employability, Skill Development	<ol style="list-style-type: none"> 1.Know the essentials of algorithms. Analyze the asymptotic performance of algorithms. Gain insights into randomized algorithms and primality testing. 2.Describe the divide-and-conquer and greedy paradigm. Explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize divide-and-conquer, greedy algorithms and analyse them. 3.Discuss the dynamic-programming paradigm and implementation of dynamic programming in various algorithmic design and analyze them. 4.Define the design of backtracking, branch and bound paradigm. Describe the algorithms using this paradigm. Synthesize and analyze them. 5.Know the concepts of non-deterministic algorithms, Lower bounds theory problems and the classes NP-hard and NP-complete problems. <p>Synthesize appropriate algorithm for a design situation</p>



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396	PROGRAMMING IN PYTHON	2027102	Employability	<ol style="list-style-type: none">1.Understand the basic concepts of various operating systems and data types.2.Illustrate the concept of strings and its manipulation.3.Illustrate python for file handling in databases.4.Understand the various graphic methods to solve different problems.5.Interpret data exploration and data munging.6.Gain knowledge on data science.
397	COMPUTER NETWORKS	2027103	Employability	<ol style="list-style-type: none">1.Have knowledge of the basic principles, concepts of computer networks and the design of OSI layers.2.To get insights into the Data Link Layer protocols3.To provide overview of the Protocols of Medium Access sub layer4.To identify the design issues and solutions in the Network Layer5.To have basic knowledge of TCP protocol6.Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies.
398	PROGRAMMING IN PHP	2027104	Employability	<ol style="list-style-type: none">1.Develop the knowledge of Hardware and Software requirements, Installation of PHP, data types, different types of operators and Control Structures in PHP.2.Implementation of arrays, Looping Structures, Functions in PHP.3.Learn the concepts of File System. Working with Forms and Implementation of Regular Expressions in Forms.4.Gain the Knowledge of OOPS concept.5.Implementation of Database Connectivity using MYSQL and Learn the concepts of Cookies.6.Implementation of Session and AJAX



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399	OBJECT ORIENTED SOFTWARE ENGINEERING	2027105	Employability	<ol style="list-style-type: none">1.Knows the reason about the basic Software life cycle models. Importance of various kinds of Project Management methods, Tracking Software Quality, Quality Standards and Metrics.2.Develop System Concepts for Object Modelling. Design and implement a software design concepts to meet desired needs and Requirements. Design the UML concepts like sequential, Use cases and Activity diagram3Concepts of Use cases, actors, and common modelling techniques. Implement the concept use cases, business actors , Significance of identifying the subsystems and business requirements4.Explain Design Workflow and System Design Concept. Create Mapping Object Model to Database Schema Testing and verification process.5.Usage of Software Configuration Management. Define maintenance and its types. Build Reverse and re-engineering process.6.Create projects using tools of software engineering and techniques.
400	DIGITAL IMAGE PROCESSING	2027208	Skill Development	<ol style="list-style-type: none">1.Describe the fundamentals of image processing and its applications.2.Gain adequate knowledge of Image enhancement techniques in spatial domain3.Detailed classification of Image enhancement techniques in frequency domain and compare with spatial domain techniques4.Analyze the Image restoration and degradation conceptsIdentify the fundamentals techniques in image segmentation5.Acquire a good knowledge of Image compression techniques6.Interpret Image segmentation, restoration and compression techniques
401	ADVANCED DATABASE MANAGEMENT SYSTEMS	2027209	Employability	<ol style="list-style-type: none">1.Describe the characteristics of Database Management Systems and about the concepts and models of database.2.Design ER-models to represent simple database application scenarios.3.Convert the ER-model to relational tables, populate relational database. Improve the database design by normalization.4.Describe the fundamental elements of Object and Object relational database management systems.5.Get the knowledge of Data Warehousing And Distributed DBMS6.Analyse and describe the Management issues of Mobile databases and Multimedia Databases



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402	ENTERPRISE COMPUTING	2027210	Employability, Entrepreneurship	<ol style="list-style-type: none">1.Understand various concepts of Enterprise programming, analyze and implement the RMI Architecture for the necessary applications.2.Implement Session management using Servlet and implement JDBC for the database connectivity.3.Develop Web applications using JSP and JSP error pages.4.Design an application that sends and receives email with attachments.5.Implement Database connectivity through Hibernate Framework and also build web applications using Spring MVC.6.Study and use modern tools for rapidly building enterprise applications.
403	DATA WAREHOUSING AND DATA MINING	2027211	Employability, Skill Development	<ol style="list-style-type: none">1.Appreciate the basic principles, concepts and applications of data warehousing and data mining2.Have a good knowledge of the preprocessing techniques3.Perform Data Mining using association rules4.Get insights from data using classification and prediction techniques5.Acquire knowledge of clustering techniques and outliers6.Apply data mining techniques to real world data by cleaning the data, integrating the data from different sources, predicting a model to group the data tuples into classes, discovering patterns using association rule mining and grouping the data set into clusters.
404	WAP AND XML	2027212	Employability, Skill Development	<ol style="list-style-type: none">1.Develop knowledge of basic wireless environment, Wireless applications protocol.2.Have a good knowledge of WAP gateway and their functionalities.3.Construct the Wireless Markup Language and its applications.4.Gain the knowledge of XML applications and Preparing style sheets.5.Implementation of XSLT.6.Compare accepted standards and guidelines to select appropriate applications of XML to meet specified performance requirements.



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405	SOFT COMPUTING	1927315	Skill Development	<ol style="list-style-type: none">1. Gain basic knowledge of Artificial Neural Network, Fuzzy logic and Genetic algorithms2. Analyse different neural network architectures3. Get insight into classical sets and fuzzy sets4. Develop the concepts of fuzzy relations and fuzzy propositions5. Gain knowledge of Genetic algorithms and the various operators6. Gain knowledge of various Algorithms
406	INTERNET TECHNOLOGY	1927316	Employability, Entrepreneurship	<ol style="list-style-type: none">1. Acquire the knowledge of .NET environment. Expertise the fundamental concepts in developing the basics of C# programming2. Develop, compile and execute console application in C# using object-oriented concepts. Construct console application in C# program using delegates and events3. Build a web application in ASP.NET using webserver controls4. Demonstrate web application with database connectivity5. Integrate web application using cookies, sessions and web services6. Create a complete web Application for real-time situations
407	CLOUD COMPUTING	1927317	Employability, Skill Development	<ol style="list-style-type: none">1. Articulate the main concepts, key technologies, strengths, and limitations, the current and future challenges of cloud computing. Analyse various cloud deployment models and their issues on the cloud.2. Identify the architecture and infrastructure of various cloud services including SaaS, PaaS, and IaaS and apply them to develop a applications.3. Analyse the implications of cloud collaboration with other applications.4. Design and develop various algorithms using tools for virtualization in cloud computing and acquire the knowledge of doing research.5. Assess cloud Storage systems and Cloud security, the risks involved, its impact and develop secure cloud applications.6. Develop and deploy cloud applications using modern tools and techniques based on the organizational needs.



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408	BIG DATA ANALYTICS	1927118	Employability	<p>1.Knows the reason about the evolution of data science and its development. Study the basic of big data analytics and to develop the code. Importance of various kinds of data comparing the other language.</p> <p>2.Develop HDFS environment using NOSQL. Implementing the queries. Aggregate the data using NOSQL</p> <p>3.Concept of basic Hadoop, data format and analysing the data in the HDFS environment. Implementing the concept Hadoop pipes and implementations and java interfaces. Significance of various methods of compression, serialization</p> <p>4.Apply Mapreduce applications, unit test , MRUnit, Create file using Mapreduce sorting and shuffling process. Creating input and output format of Mapreduce.</p> <p>5.Usage Hadoop related tools. Definition of hbase,Hbase clients, Cassandra, Pig, HiveQL. Life Build data manipulation byHiveQL queries.</p> <p>6.Analyze Life Build data manipulation byHiveQL queries.</p>
409	CRYPTOGRAPHY	1927319	Employability, Skill Development	<p>1.Gain knowledge about Conventional encryption model</p> <p>2.Analyse Euclidean Algorithm and Number theory</p> <p>3.Understanding Key exchanges.</p> <p>4.Detailed representation of Hashing functions.</p> <p>5.Describe the various Digital signatures logic.</p> <p>6.Apply different encryption and decryption techniques</p>
M.SC., INFORMATION TECHNOLOGY - 28				
410	OPERATING SYSTEM.	2028101	Skill Development	<p>1.Basic concepts of operating system, process management, Threads - Interprocess Communication. CPU Scheduling</p> <p>2.Discuss various Process Synchronization problems, critical region and monitors</p> <p>3.Discuss about Deadlock Characterization, Methods for handling Deadlocks, Prevention, Avoidance, and Detection of Deadlock and Recovery from deadlock.</p> <p>4.Analyse the Memory Management and its allocation policies.</p> <p>5.Evaluate the various Page Replacement Algorithms handled by Operating System.</p> <p>6.Analyse the Virtual memory and Thrashing concepts.</p> <p>7.Interpret the mechanisms adopted for File Sharing in Distributed Applications.</p> <p>8..Demonstrate the basic concepts of operating system</p>



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411	COMPUTER ORGANIZATION AND ARCHITECTURE.	2028102	Skill Development	<ol style="list-style-type: none">1.Detailed representation about number systems and boolean algebra.2.Describe the various types of flip flops, registers and circuit system.3.Analyse the stack organization and identify the addressing modes.4.Interpret peripheral devices with memory access.5.Acquire a good knowledge about memory hierarchies and mapping.6.Gain knowledge about Virtual memory and data manipulation
412	DATABASE MANAGEMENT SYSTEMS.	2028103	Employability	<ol style="list-style-type: none">1.Describe a database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.2.Design ER-models to represent simple database application scenarios. Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data for current needs. Develop applications using DDL, DML queries. <p>Identifies the Functional dependencies, decompositions, lossless join, and dependency preserving decomposition. Classify the various normalization techniques and improve the database design by applying it.</p> <p>Use the concept of a transaction and design the database using some tools which satisfies the ACID properties when concurrent transaction occurs in a database.</p> <p>Evaluate the sophisticated access protocols to control access to the database.</p> <p>Identifies the suitable File organization methods and access methods and design the database for storing the data.</p> <p>Develop and evaluate a real database application using a database management system.</p>



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413	PRINCIPLES OF PROGRAMMING LANGUAGES	2028104	Skill Development, Employability	<ol style="list-style-type: none">1. Gain knowledge on programming in different paradigms. Express syntax and semantics in formal notation. Design features of programming languages, and justify their design decisions2. Explain the general concepts of data types, Statements and Expressions and identify the design issues.3. Identify the design issues of Subprograms and Blocks in programming languages4. Compare the concepts of concurrency control and exception handling for various programming Languages.5. Analyze and compare functional programming languages and the scripting languages.6. Analyze a problem, and identify and define the computing requirements appropriate to its solution
414	LINUX SYSTEM ADMINISTRATION	2028105	Employability	<ol style="list-style-type: none">1. Gain knowledge insights of Linux environment basics2. Operate running Linux systems by managing the file system mounts and monitoring, concepts related to user and groups3. Configure Linux packages and kernel and backup management using bacula4. Acquire knowledge on shell commands, scripts, managing files, pipes and redirections. Choose appropriate Linux commands to make effective use of the environment to solve problems5. Configure and manage simple TCP/IP network services, file system and web hosting on a Linux system6. Effectively use the Linux system to accomplish typical personal, office, technical, and software development task
415	DATA STRUCTURES AND ALGORITHMS	2028208	Employability	<ol style="list-style-type: none">1. Define data structures like array, stack, queues and linked list.2. Explain insertion, deletion and traversing operations on data structures.3. Identify the asymptotic notations to find the complexity of an algorithm.4. Compare various searching and sorting techniques.5. Choose appropriate data structure while designing the algorithms.6. Design advanced data structures using nonlinear data structures.



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416	COMPUTER NETWORKS	2028209	Employability	<p>1.Gain a basic knowledge of Networking and functions of each layer in OSI and TCP/IP model. Demonstrate the network topology.</p> <p>2.Diagnose the problems of a Current Multiplexing Techniques.</p> <p>3.Classify the various multiple access protocols and identify the deficiencies in existing protocols, and then go onto formulate new and better protocols.</p> <p>4.Apply the mathematical background of routing protocols. Analyze the collision occurred in current networks.</p> <p>5.Classify the classes of IP protocols and select the IP addresses for the given network.</p> <p>6.Describe the issues surrounding in Session layer and Transport layer and identify how to rectify.</p> <p>Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies.</p>
417	MICROPROCESSOR AND MICROCONTROLLER	2028210	Employability	<p>1. Recognize 8086 microprocessor simulator, knowledge of 8086 instruction set and ability to utilize it in assembly language programming.</p> <p>2.Importance of various kinds of Project Management methods, Tracking Software Quality, Quality Standards and Metrics.</p> <p>3.Assess and solve basic binary math operations using the microprocessor and explain the microprocessor's and Microcontroller's internal architecture and its operation within the area of manufacturing and performance.</p> <p>4. Apply knowledge and demonstrate programming proficiency using the various addressing modes and data transfer instructions of the target microprocessor and microcontroller.</p> <p>5.Analyze assembly language programs; select appropriate assemble into machine a cross assembler utility of a microprocessor and microcontroller.</p> <p>6.Compare accepted standards and guidelines to select appropriate Microprocessor (8085 & 8086) and Microcontroller to meet specified performance requirements.</p> <p>Design electrical circuitry to the Microprocessor I/O ports in ordstem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems.</p>



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418	PROGRAMMING IN PHP	2028211	Employability	<ol style="list-style-type: none">1. Develop the knowledge of Hardware and Software requirements, Installation of PHP, data types, different types of operators and Control Structures in PHP.2. Implementation of arrays, Looping Structures, Functions in PHP.3. Learn the concepts of File System. Working with Forms and Implementation of Regular Expressions in Forms.4. Gain the Knowledge of OOPS concept.5. Implementation of Database Connectivity using MYSQL and Learn the concepts of Cookies.6. Implementation of Session and AJAX
419	OBJECT ORIENTED SOFTWARE ENGINEERING	2028212	Employability	<ol style="list-style-type: none">1. Knows the reason about the basic Software life cycle models Importance of various kinds of Project Management methods, Tracking Software Quality, Quality Standards and Metrics.2. Develop System Concepts for Object Modelling Design and implement a software design concept to meet desired needs and Requirements.3. Design the UML concepts like sequential, Use cases and Activity diagram Concepts of Use cases, actors, and common modelling techniques.4. Implementing the concept use cases, business actors, Significance of identifying the subsystems and business requirements5. Explain Design Workflow and System Design Concept Create Mapping Object Model to Database Schema Testing and verification process Creation.6. Usage of Software Configuration Management Definition and Types of maintenance Life Build Reverse and re-engineering process.



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420	ENTERPRISE COMPUTING	1928315	Skill Development,Employability	<ol style="list-style-type: none">1.Understand various concepts of Enterprise Computing, analyze and implement the RMI Architecture for the necessary applications.2.Implement Session management using Servlet and implement JDBC for the database connectivity.3.Develop Web applications using JSP and JSP error pages.4.Design an application that sends and receives email with attachments.5.Implement Database connectivity through Hibernate Framework and also build web applications using Spring MVC.6.Study and use modern tools for rapidly building enterprise applications.
421	PROGRAMMING IN PYTHON	1928316	Employability	<ol style="list-style-type: none">1.To acquire basic programming skills of Python programming language.2.To develop applications using python sequence.3.Implement basic object oriented concepts like inheritance and polymorphism.4.Develop GUI applications using PyGTK. and GUI applications.5.To have basic knowledge of implementing data science in python.6.To use python as a tool for research. <p>"</p>
422	DATA WAREHOUSING AND DATA MINING	1928317	Skill Development,Employability	<ol style="list-style-type: none">1.To appreciate the basic principles, concepts and applications of data warehousing and data mining2.Have a good knowledge of the preprocessing techniques3.To perform Data Mining using association rules4.To get insights from data using classification and prediction techniques5.Knowledge of clustering techniques and outliers6.To be able to apply data mining techniques to real world data by cleaning the data, integrating the data from different sources, predicting a model to group the data tuples into classes, discovering patterns using association rule mining and grouping the data set into clusters.



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423	SOFTWARE TESTING	1928318	Employability	<ol style="list-style-type: none"> 1. Discuss about the concept of bugs and analyses the principles in software testing to prevent and remove bugs. 2. Discuss about domains and path 3. Analyze Linguistic and Structural Metric 4. Discuss about Verification and Validation. Analyse various levels of Testing, Testing Approaches, and Types of Testing & Test Plan. 5. Analyze Defect Management 6. Discuss about Acceptance testing and special test. 7. Analyze various automation testing tools. 8. Gain the knowledge about various testing tools.
424	CRYPTOGRAPHY	1928320	Skill Development, Employability	<ol style="list-style-type: none"> 1. Gain knowledge about Conventional encryption model 2. Analyse Euclidean Algorithm and Number theory 3. Understanding Key exchanges. 4. Detailed representation of Hashing functions. 5. Describe the various Digital signatures logic. 6. Apply different encryption and decryption techniques
M.C.A.(SHIFT - I) - 29				
425	Principles of Database Management Systems	2029101	Employability, Skill Development	Implementation of Relational Database in Oracle SQL, analyzing of DDL, DML and DRL statements, Joins, Group functions and Integrity Constraints with syntax and examples.
426	Advanced Java Programming	2029102	Employability, Skill Development	Describe how servlets fit into Java-based web application architecture. Design and implement dynamic web page with validation using JavaScript objects.
427	Advanced Data Structures and algorithms	2029103	Employability, Skill Development	Evaluate and provide suitable techniques for solving a problem using basic properties of Data Structures. Determine the drawbacks of data structures and algorithms and assess the tradeoffs involved.
428	Operating System Concepts	2029104	Employability, Skill Development	Acquire the knowledge of process synchronization and illustrate the critical section problems and ways to handle the dead lock problems with the help of algorithms. Describe file management with file organization, file access methods, B-trees, and File System security.
429	NME -I - Basics of Statistics	2029105	Employability, Skill Development	Distinguish Discrete and continuous distributions. Solve the real time problems involving various distributions like Binomial, Poisson and normal distributions. Explain the concept of Bivariate analysis and point out the importance of correlation analysis, Regression analysis and various curves using method of least squares.
430	Python for Data Science	2029209	Skill Development	Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions. Discover the capabilities of numpy, scipy and matplotlib for scientific programming.



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431	Mobile Application Development	2029210	Employability, Skill Development	Illustrate the use of activities, fragments and intents in Android to invoke Built-in Applications and use of notification in Android. Developing Android Services by establishing communication between a service and an activity and illustrating the steps for publishing Android applications.
432	Fundamentals of Machine Learning	2029211	Employability, Skill Development	The learners shall understand the machine learning techniques like Clustering, Induction, Bayesian, Decision Tree, Analytical and Instance based learning and to apply the techniques in computing. Introduce students to state-of-the-art methods and modern programming tools for data analysis.
433	Mobile Communications	2029212	Employability	Illustrate the generations of telecommunication systems in wireless network. Determine the functionality of network layer and Identify a routing protocol for a given Ad hoc networks
434	Principles of Digital Image Processing	2029213(A)	Skill Development	Analyze the need for image transforms, different types of image transforms and their properties. Familiar with the use of Python and OpenCV for Image Analysis
435	Introduction to Multimedia	2029213(B)	Employability, Skill Development	Describe the process of digitizing (quantization) of different analog signals (text, graphics, sound and video). Apply methodology to develop a multimedia system.
436	Introduction to Big Data Analytics	2029318	Employability, Skill Development	Knows the reason about the evolution of data science and its development. Study the basic of big data analytics and to develop the code. Importance of various kinds of data. Analyze Life Build data manipulation by HiveQL queries. comparing the other language.
437	Dot Net Programming	2029319	Employability, Skill Development	Understand the basic concepts of VB.NET framework. Explore Microsoft .NET Integrated Development Environment (IDE). Apply ADO.NET and OLEDB concepts for establishing connectivity among applications with reduced code complexity and develop network applications
438	Principles of Cloud Computing	2029320	Employability, Skill Development	Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models. Implementation of cloud platform using python
439	Computer Forensics and Bioinformatics	2029321(A)	Employability, Skill Development	Identify the role of the forensic scientist and physical evidence within the criminal justice system. Identify and examine current and emerging concepts and practices within the forensic science field.
440	Introduction to Internet of Things	2029322(A)	Skill Development	Describe the fundamentals of IoT and M2M. Illustrate the application of IoT in Industrial Automation and identify Real World Design Constraints.
M. B.A. - 30				
451	MANAGEMENT PROCESS AND ORGANIZATIONAL BEHAVIOUR	2030101	Employability, Skill Development	CO1 Apply the Principles of Management and effective Decision making and critical thinking and strategy formulation. CO2 Demonstrate the applicability of the concept of OB to analyze the behavior of people in the Organization. CO3 Analyze Individual Behavior, Job Satisfaction and the importance of Motivation. CO4 Exposure on Group Behavior and the need of Leadership and to handle stress CO5 Evaluate Organization needs, structure and its effectiveness



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452	STATISTICS FOR MANAGEMENT	2030102	Employability	CO1 Recall and solving problems based on the addition theorem, multiplication theorem, conditional probability and Baye's theorem. Restate the Discrete distributions such as Binomial and Poisson distribution. CO2 Differentiate the univariate and bivariate analysis. Explain correlation, rank correlation and regression analysis by numerical example CO3 Summarize the concept of sampling, Null Hypothesis, alternative Hypothesis, type I and type II errors, sampling errors and standard errors. CO4 Distinguish between small samples and large samples. Summarize the concept of parametric test z-test, t-test, F-test and non parametric test chi-square test by given examples. CO5 Demonstrate the analysis of variance of one way classification and two way classification with numerical examples
453	ECONOMICS FOR MANAGERS	2030103	Employability, Entrepreneurship	CO1 Analyse Market demand and supply patterns through forecasting techniques. CO2 Evaluate National Income using techniques and underlying policies. CO3 Compare market structures and different pricing methods. CO4 Analyse and evaluate demand pattern using Date software. CO5 Identify the consequence of globalization and role of Banks in International Trade.
454	ACCOUNTING FOR MANAGERS	2030104	Employability, Entrepreneurship	CO1 Apply the conceptual framework of accounting, and apply the comprehensive treatment of accounting principles and standards. CO2 Analyze the financial concepts and interpret the Financial statements CO3 Analyze and Evaluate financial data of Company. CO4 Apply the cost principles for production of products. CO5 Apply Analytical techniques to generate financial statements through technology application.
455	LEGAL SYSTEMS IN BUSINESS	2030105	Employability, Entrepreneurship, Skill Development	CO1 Examine the relevance of business law to individuals and businesses and the role of law in an economic, political and social context CO2 Identify the legal principles governing contractual agreements. CO3 Apply the principles of company law in Incorporation process. CO4 Implement appropriate laws in IR. CO5 Analyze and evaluate Consumer Protection Laws.
456	INTERNATIONAL BUSINESS MANAGEMENT	2030106	Employability, Entrepreneurship	CO1 Recognize challenges and opportunities for Foreign Trade markets CO2 Critically analyze the procedures in Exports and Imports CO3 Explore strategies and analyze the impact of Global strategies in International Business CO4 Apply the concept of globalisation techniques to support problems in MNC management CO5 Evaluate the impact of statutory and regulatory compliances on an organizations integrative trade initiatives
457	ENTREPRENEURSHIP	2030107	Entrepreneurship	CO1 Imbibe entrepreneurial concept and models, and Develop skill CO2 Differentiate entrepreneurs and Entrepreneurs skill CO3 Establish records for small business, relating to legal aspects and other functional management practices CO4 Mobilize resources for ED in an Optimum way CO5 Identify and Utilize the support eco-system for managing the business and start a New Business Model.



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458	HUMAN RESOURCE MANAGEMENT	2030208	Employability, Skill Development	CO1 Evaluate the HR Environment and develop HR policies with IR factors and solve HR Problems CO2 Analyze the dynamics in HR environment and contribute to development, implementation and evaluation of Employee recruitment, selection and retention plans and process CO3 Develop relevant skills necessary for application in HR related issues CO4 Develop, implement and evaluate employee orientation, training and development process CO5 Facilitate and support effective employee and labor relations
459	RESOURCE MANAGEMENT TECHNIQUES	2030209	Employability	CO1 Formulate the Linear programming problem and solve by graphical method, simplex method, Big Method. CO2 Define transportation and assignment problem. Demonstrate the balanced, unbalanced, maximization and minimization assignment problems with illustration. Differentiate Transportation problem and assignment problem CO3 Recall the concept of Critical Path Method and Programme Evaluation Review Technique. Solving real time problems using critical path method and Programme evaluation technique CO4 Explain the queuing theory concept. List the out the models of queuing theory and discuss with numerical examples. CO5 Restate the concept of sequencing problem in Business. Distinguish between n jobs two machines, n jobs three machines, n jobs m machines and 2 jobs n machines by giving examples and illustrate.
460	OPERATIONS MANAGEMENT	2030210	Employability	CO1 Identify the elements of operations management and various transformation process to enhance productivity and competitiveness CO2 Analyze and evaluate various facility alternatives and their capacity decisions, develop a PPC, MPS, scheduling and sequencing techniques CO3 Manage the scope, cost, timing and quality of the project and focus on suitable quality control methods CO4 Plan and implement suitable inventory/material handling principles and practices CO5 Utilize and Implement systems integrated managerial functions
461	FINANCIAL MANAGEMENT	2030211	Employability, Skill Development	CO1 Enables knowledge on Strategic Financial Policy and Planning and various Financial Models involved in it. Importance of Capital Budgeting in Finance. CO2 Evaluate the Investment Decision and to enrich their knowledge on Risk, Uncertainty and Time value of Money. CO3 Analyze the role of Capital Structure and Restructuring CO4 Plan and Implement the required Working Capital and Cash Management CO5 Explore on Securities and Commercial Paper
462	RESEARCH METHODOLOGY	2030212	Employability	CO1 Analyze the impact of research in business and evaluate research problems and develop hypothesis CO2 Apply the appropriate research design and construct a measurement scale. CO3 Develop a valid instrument/Questionnaire for data collection using sampling technique CO4 Apply the SPSS for data analysis CO5 Apply SPSS for data analysis and develop a report using APA format



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463	MANAGEMENT INFORMATION SYSTEMS	2030106	Employability, Skill Development	CO1 Develop leadership qualities through Management Information system in achieving business competitive advantage through informed decision making. CO2 Develop logical models for the information systems based on stated user requirement. CO3 Select and apply appropriate programming structure and techniques based on specific problem context. CO4 Modify implementation plan appropriately in response to unexpected requirement or environmental change. CO5 Perform common business transaction as an end user in an ERP system.
464	MARKETING MANAGEMENT	2030214	Employability, Entrepreneurship	CO1 Formulate a marketing plan including marketing objectives, marketing mix, statistics and evaluate competition CO2 Identify and demonstrate the dynamic nature of the environment in which marketing decisions are taken. Formulate marketing plan including marketing objectives, marketing mix, strategies, and budgetary considerations. CO3 Determine strategies for developing new products and services relevant to evolving market needs and develop pricing policies CO4 Develop plans for efficient distribution CO5 Establish the usage of social media, internet to explore new markets.
465	PERSONALITY ENRICHMENT	MBA -S-102	Employability	1. Self-Description– Reflect and answer the following questions on a sheet of paper about yourself: Who am I? What am I like? How do others perceive me? What are my strengths as a person? In what areas do I want to develop greater skills? 2. Adjective Checklist – the following exercise is aimed at providing an opportunity for participants to disclose their view of themselves to the other members of their group and to receive feedback on how the other group members perceive them. 3. Self-Disclosure and Self Awareness – the purpose of this exercise is to allow participants to focus on the areas as described in the Johari Window. Unit II – Anger, Stress and Managi
466	STRATEGIC MANAGEMENT	1930315	Employability, Skill Development	CO1 Evaluate the strategies implemented by organizations and to analyze the mission, vision and their objectives CO2 Analyse micro and macro environmental issues CO3 Identify strategic capabilities and gap and resolve them by applying suitable strategies CO4 Apply control techniques/audit performance of strategy implemented CO5 Analyze the issues faced by the organization
467	TOTAL QUALITY MANAGEMENT	1930316	Employability, Entrepreneurship	CO1 Relate Philosophies of Quality Management with organization performance CO2 Demonstrate tools and techniques of Quality Management and Implementation CO3 Analyze the various types of techniques are used to measure quality and create customer satisfaction CO4 Use quality management methods analyzing and solving problems of organization; CO5 Critically appraise the organizational, communication and teamwork requirements for effective quality management



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468	INVESTMENT MANAGEMENT	1930317	Employability, Entrepreneurship, Skill Development	CO1 Analyze the investment securities and settings CO2 Appraise about capital market and SEBI CO3 Evaluate about Economy Analysis and Industry life cycle CO4 Create Fundamental analysis and Technical analysis for their investment CO5 Analyze the Portfolio theory and the mutual funds benefits and impact.
469	INTERNATIONAL FINANCIAL MANAGEMENT	FIN-302	Employability, Entrepreneurship, Skill Development	CO1 Compare Finance Functions nationally and Internationally and also to Analyze the International Monetary System CO2 Evaluate Foreign Exchange Market and FOREX CO3 Design International Long Term Finance by Analyzing various Banks both Nationally and Internationally CO4 Distinguish cross border Financing Decision and also about Working Capital Management CO5 Analyze the International Taxation and International Accounting
470	MERCHANT BANKING AND FINANCIAL SERVICES	2030318	Employability, Entrepreneurship	CO1 Analyses various Financial Services and Products available in the market. CO2 Evaluate about the Functions and Role of Merchant Banker CO3 Appraise their credentials for credit Rating and also about Mergers and Acquisitions CO4 Analyse the concept of Factoring, Financing and Evaluation. CO5 Evaluate about Consumer credit and Venture Capital
471	FINANCIAL DERIVATIVES	1930425	Employability, Skill Development	CO1 Analyse the various types of derivatives and its types CO2 Evaluate the value of forward contracts, hedging and limitations CO3 Appraise about Future contracts and its nature CO4 Critically examine the options and its values and strategies CO5 Develop knowledge on Swaps its principle and valuation and construct a swap model
472	RISK MANAGEMENT AND INSURANCE	1930428	Employability	CO1 Analyze the various types of risk and also to measure risk. CO2 Evaluate the value of Risk, its avoidance, retention, diversifying and Controlling. CO3 Apply Risk Management tools and Hedging. It also gives exposure to Forward and Future Contracts CO4 Evaluate an exposure on Insurance sector and IRDA CO5 Evaluate on Insurance Policies, its process of claim, Foreign Insures in India and Bank Assurance



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473	CORPORATE TAXATION	FIN-403	Employability, Entrepreneurship	<p>CO1 Evaluate Income Tax and accounting and Income exempted from Tax</p> <p>CO2 Formulate head of income and about salaries and house property</p> <p>CO3 Compare Profits and Gains of business and profession, Capital gains and income from other sources</p> <p>CO4 Appraise Set off and carry forward of losses, assessment of individual & firms and deductions</p> <p>CO5 Formulate Assessment procedures, Tax planning, PAN, Filing of returns and IT authorities</p>
474	INDIAN FINANCIAL SYSTEM	FIN-405	Employability, Entrepreneurship	<p>CO1 Providing an in-depth analysis of the commercial banking in the liberalized Indian economy</p> <p>CO2 Formulate - Financial Statement Analysis and Bank Performance Measurement</p> <p>CO3 Equipping the students with the tools used in interpreting and evaluating performance</p> <p>CO4 Appraise Set off and carry forward of losses, assessment of individual & firms and Deductions</p> <p>CO5 Formulate Assessment procedures, Familiarising the students with the new banking practices and processes</p>
475	SERVICES MARKETING	1930319	Employability, Entrepreneurship	<p>CO1 Interpret the growth of service economy and design service quality measurements to build customer loyalty. CO2 Demonstrate a knowledge of the extended marketing mix for services. CO3 Create service blueprinting and adopt positioning strategies for better service. CO4 Recognize the challenges faced in services delivery as outlined in the services gap model. CO5 Identify and formulate Marketing strategies for different service sectors.</p>
476	INTEGRATED MARKETING COMMUNICATION	1930427	Employability, Entrepreneurship	<p>CO1 Demonstrate a comprehensive understanding of Marketing Communications theories and concepts. Understand primary marketing communication models the marketer's use. CO2 Develop suitable promotional objective and strategy for the Marketing campaign. CO3 Describe a range of Advertising media and methods available to marketers. Analyse and evaluate the cost effectiveness of various forms of media. CO4 Formulate appropriate promotional tool for a product or service. CO5 Conceive the issues of the Promotional activities.</p>



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477	GLOBAL MARKETING MANAGEMENT	MKT-303	Employability, Entrepreneurship	CO1 Apply the principles of Global marketing, for effective marketing in domestic market. CO2 Apply all Political, legal and regulatory compliances while marketing indifferent countries.CO3 Develop skills in researching and analyzing trends in Global markets and in modern marketing places. CO4 Apply the principles of Marketing mix for effective campaign. CO5 Assess an organization's ability to enter and compete in international markets.
478	SALES AND DISTRIBUTION MANAGEMENT	1930320	Employability, Entrepreneurship, Skill Development	CO1 Apply the concept of sales and demonstrate the roles and responsibilities of sales person as a KEY individual to achieve the Organization goal. CO2 Describe and Formulate strategies to effectively manage company's sales operations. CO3 Illustrate the fundamentals of Distribution channels and channel members. CO4 Identify the Channel intermediary and apply new strategies to pitch new market. CO5 Perceive digital tools to enhance logistics management.
479	RETAIL MANAGEMENT	1930428	Employability, Entrepreneurship	CO1 Discuss the concept of retailing, its evolution in Global retailing, and India's trend in Retailing. Importance of retail in the distribution component of the marketing mix. CO2 Conceive the complexity of retail channels (store and non-store) used as alternative routes to market, and evaluate the merits of alternative strategies for different types of retail business. CO3 Interpret and implement effective retail strategies for better Store Management. CO4 Apply the core Marketing strategies for effective Retail Shop Management. CO5 Apprehend emerging trends in Retailing and correlate the factors influencing Retail shopper's behavior.
480	SOCIAL MEDIA MARKETING	MKT-404	Entrepreneurship	CO1 Develop effective social media marketing strategies for various types of industries and businesses. CO2 Apply all Political, legal and regulatory compliances while marketing in different countries. CO3 Describe the major social media marketing portals that can be used to promote acompany, brand, product, service or person. CO4 To work cooperatively within social media community by observing and listening critically with openness, then act ethically and follow through on commitments when communicating with various audience and build positive reputation within the community. CO5 Develop social media marketing plan and track progress in achieving goals with a variety of measurement tools, services, and metrics.



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481	STRATEGIC HUMAN RESOURCE MANAGEMENT AND DEVELOPMENT	1930429	Employability	CO1 Analyse the HR Framework in an organization and assess the HRD needs CO2 Apply digital techniques for HR functions like Recruitment and selection CO3 Identify the consequences of cultural diversity issues CO4 Design and optimize career development/planning CO5 Implement best practices of skill development to employees
482	LABOUR LEGISLATIONS	1930321	Employability	CO1 To review the perspectives, theories and concepts in the field of labor and employment relations CO2 To interpret the salient features of welfare and wage Legislations CO3 To inspect the laws relating to Industrial Relations, Social Security and Working conditions and working conditions in different settings. CO4 To execute labor law and individual employment rights CO5 To assess the developments and changes that have taken place in the field of labour law from time to time
483	GLOBAL HUMAN RESOURCE MANAGEMENT	HR-303	Employability, Skill Development	CO1 Evaluate the developing role of human resources in the global arena CO2 Analyze complex issues and manifold risks that have arisen due to increased globalization CO3 Develop a diagnostic and conceptual understanding of HRM in a broader, comparative and international perspective CO4 Manage the growing presence of multinationals and increasing diversity of workforce demands CO5 Analyze the strategic issues and strategies required to select and develop cross-cultural manpower resources
484	LEADERSHIP AND ORGANISATIONAL EFFECTIVENESS	1930430	Employability, Skill Development	CO1 Interpret the importance of Leader with the theories applied, grid and models. CO2 Analyze the complexities associated with management of the group behavior in the organization. CO3 Develop own strategies for team leadership and influence them CO4 Examine relevant issues in applied management and leadership; including ethics, globalization, and strategic management. CO5 Generate ideas Managerial Effectiveness through group influences, negotiation skills and knowledge Management.



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485	KNOWLEDGE MANAGEMENT	HR-401	Employability	<p>CO1 Analyze the different knowledge types and explain how they are addressed by knowledge management</p> <p>CO2 Examine how valuable individual, group and organizational knowledge is managed throughout the knowledge management cycle</p> <p>CO3 Interpret the major roles and responsibilities in knowledge management implementations</p> <p>CO4 Identify some of the key tools and techniques used in knowledge management applications.</p> <p>CO5 Formulate and empower employees to solve customer problems in organizations</p>
486	TRAINING AND HUMAN PERFORMANCE ENHANCEMENT	1930322	Employability, Skill Development	<p>CO1 Discuss various aspects of the training design process and describe the strategic training and development process.</p> <p>CO2 Identify different methods used in needs assessment and discuss the role of organizational analysis, individual analysis and task analysis in needs assessment.</p> <p>CO3 Discuss the strength and weakness of traditional training methods and the new technology training methods</p> <p>CO4 Design a program for preparing for cross cultural assignments and able to discuss the potential legal issues that relate to training</p> <p>CO5 Effectively perform the manager's role in career management and design an effective socialization program for employees</p>



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487	RECRUITMENT AND SELECTION	1930430	Employability	<p>CO1 Develop job specifications and person specifications to fit current recruitment needs of the business</p> <p>CO2 Examine selection methods and their effectiveness in helping identify the best interview candidates</p> <p>CO3 Best practices and protocols in responding to, and short-listing, applicants</p> <p>CO4 Develop communications and techniques in order to get the best out of recruitment interviews identify</p> <p>CO5 Recognize the importance of adopting a structured recruitment process and the use of relevant selection methods</p>
488	BIG DATA TECHNOLOGY	SYS-301	Employability	<p>CO1 Work with big data platform and explore the big data analytic techniques business applications.</p> <p>CO2 Apply the fundamentals of various big data analytic techniques.</p> <p>CO3 Analyze the HADOOP and MapReduce technologies associated with big data analytics.</p> <p>CO4 Design efficient algorithms for mining the data from large volumes</p> <p>CO5 Differentiate various big data technologies like Hadoop, Pig, Hive, Hbase and No-SQL</p>
489	DATA MINING AND WAREHOUSING	SYS-302	Employability, Entrepreneurship	<p>CO1 Analyze the basic concepts of data warehousing and the required skills to develop and use them.</p> <p>CO2 Apply the methods and techniques for preprocessing of data.</p> <p>CO3 Describe the designing of Data Warehousing to solve the root problems.</p> <p>CO4 Explain different methodologies used in data mining and data warehousing</p> <p>CO5 Compare different approaches of data warehousing and data mining with various technologies.</p>
490	TECHNICAL WRITING AND PRESENTATION	MBA-s-203	Employability	<p>Aims to teach oral and written skills in English with illustrations and examples drawn from project reports, paper presentations and published papers in scientific journals. The grammar exercises are not taught in a rule-based manner but through observation and use in specific contexts. Newspaper and popular scientific reports are also included as course material. Presentation skills are taught through practice sessions. During the course, all participants make presentations and also critique the presentations by others. Emphasis is placed on teaching how to present the same findings orally and in writing.</p>



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491	CLOUD COMPUTING	SYS-303	Employability, Entrepreneurship	<p>CO1 Describe the key technologies, architecture, strengths, limitations and applications of cloud computing and explain the types and service models of cloud.</p> <p>CO2 Deploy applications over commercial cloud computing infrastructures such as Amazon Web Services, Windows Azure, and Google App Engine.</p> <p>CO3 Communicate through cloud for the management and improvement of business or an organisation.</p> <p>CO4 Understand different CPU, memory and I/O virtualization techniques that serve in offering software, computation and storage services on the cloud</p> <p>CO5 Describe the core issues such as security, privacy, and interoperability in cloud platform.</p>
492	RURAL DEVELOPMENT PROGRAMME	MBA-s-303	Employability	<p>To serve the needs of society and industry through education and research</p> <ul style="list-style-type: none"> To develop innovative leaders by giving hands on experience in social problem.
493	E – COMMERCE TECHNOLOGY AND MANAGEMENT	SYS-401	Employability, Entrepreneurship	<p>CO1 Identify and describe the unique features of e-commerce technology and discuss their business significance</p> <p>CO2 Discuss the influence of electronic retailing, marketing and advertising on Business.</p> <p>CO3 Describe the business models and recognize business models in other emerging areas of e-commerce</p> <p>CO4 Identify the key security threats in business environment and understand the major e-commerce payment mechanism.</p> <p>CO5 Appreciate the importance of policies, procedures and laws in creating security.</p>
494	EMERGING TECHNOLOGIES FOR MANAGEMENT	SYS-402	Employability, Entrepreneurship	<p>CO1 Explain the basic concepts of mobile computing, mobile security mobile OS and mobile database</p> <p>CO2 Describe the wireless architecture, its benefits, applications and limitations.</p> <p>CO3 Discuss the WAP architecture, development tools and software and apply them in business management.</p> <p>CO4 Identify and analyse the environmental impact of the Information and Communication Technology and current mechanisms to reduce the energy consumption of ICT products</p> <p>CO5 Discuss the privacy risk and security management in the cloud.</p>



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495	CAREER ADVANCEMENT COURSE FOR MANAGERS	MBA-s-402	Employability	<input type="checkbox"/> To improve aptitude, problem solving skills and reasoning ability of the students <input type="checkbox"/> To solve problems in teams & groups <input type="checkbox"/> To understand the importance of verbal and written communication in the workplace <input type="checkbox"/> To understand the significance of oral presentations, and the cases of their use <input type="checkbox"/> To practice verbal communication by making a technical presentation to the class <input type="checkbox"/> To develop time management and creative thinking skills.
496	ENTERPRISE RESOURCE PLANNING	SYS-403	Employability, Entrepreneurship	<p>CO1 Describe the fundamental technology, issues in planning design and the implementation of ERP systems.</p> <p>CO2 Analyse the business process and able to redesign and restructure the organisation.</p> <p>CO3 Discuss the role of customers, vendors and employees, the key issues, the implementation methodology and the guidelines for the ERP implementation.</p> <p>CO4 Explain the post implementation phase, success, failures and costs and risks of failure in ERP implementation.</p> <p>CO5 Explore the emerging trends in ERP.</p>
497	INTEGRATED SUPPLY CHAIN MANAGEMENT	1930323	Employability	<p>CO1 Recollect the implications of SCM, network design decisions and models and scheming distribution network in supply chain management</p> <p>CO2 Assess the sourcing decisions in supply chain boons and banes of 3PL/4PL and various types of RSP.</p> <p>CO3 Understand the tools and techniques useful in implementing supply chain management</p> <p>CO4 Analyse and appraising the performance of supply chain to control it effectively.</p> <p>CO5 Understand the key concepts and techniques that will allow you to analyze, manage and improve supply chain processes for different industries and markets.</p>
498	PURCHASING MANAGEMENT	1930324	Employability, Skill Development, Entrepreneurship	<p>CO1 Learn to analyze and develop a company's purchasing processes and organization</p> <p>CO2 Understand the companies' purchasing decisions and to compare Local, Nation wide and World wide suppliers</p> <p>CO3 Understand the role of purchasing in successful cooperation between companies</p> <p>CO4 Design purchasing profit centric models and perform cost analysis</p> <p>CO5 Know the best practices in Negotiations, ethics in purchasing and code of conduct for suppliers</p>



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499	INTERNATIONAL LOGISTICS AND MANAGEMENT OF GLOBAL SUPPLY CHAIN	1930431	Employability, Entrepreneurship	CO1 Analyse the global movement of goods and compare the size of Industry with different Industries. CO2 Evaluate the low cost sourcing from different countries and their challenges faced. CO3 Implement Green supply chain movement of goods. CO4 Design Global network to achieve Seamless performance across the market. CO5 Design Supply chain mapping for the process.
500	TRANSPORTATION AND WAREHOUSING MANAGEMENT	1930432	Employability	CO1 Apply the flow of goods, Ordering rules and Information transmittal methods. CO2 Evaluate the different types of transportation and Insurance procedure to ship the goods. CO3 Plan Warehouse and Logistics operations for optimum utilization of resources. Learn more about technology enabled fulfillment centers. CO4 Analyze and Interpret different types of Machinery used to process materials and for stock storage and revival. CO5 Apprehend different Transportation and Warehousing Management System and its usage in Shipment of goods.
M. A., ECONOMICS (SHIFT I) - 31				
501	MICRO ECONOMIC THEORY - I	2031101	Employability ,Skill Development	Understand monopoly and monopolistic competition of markets
502	STATISTICAL METHODS - I	2031102	Employability ,Skill Development	To illustrate the application of index numbers through different methods.
503	RESEARCH METHODOLOGY	2031103	Employability ,Skill Development	To be able to select a research problem after careful review of literature and formulate the design for the study.
504	HEALTH ECONOMICS	2031104	Employability	To analyse the health policy in India and Tamilnadu.
505	ORGANISATION & BEHAVIOURAL ECONOMICS	2031105	Employability	To understand organizational culture and implementation of organizational change.
506	MICRO ECONOMIC THEORY - II	2031206	Employability	Understanding various welfare functions and its relevance
507	STATISTICAL METHODS - II	2031207	Skill Development	To demonstrate the utility of time series in forecasting and assess the applicability of its various methods
508	<u>INDIAN ECONOMIC DEVELOPMENT & POLICY</u>	2031209	Employability	To assess the recent trends in India's service sector.
509	MONETARY ECONOMICS	2031208	Employability	Compare the monetary systems in India with that of European monetary systems
510	MANAGERIAL ECONOMICS	2031210	Employability ,Skill Development, Entrepreneurship	To examine the implications of government intervention in economic development



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511	MACRO ECONOMIC THEORY - I	1931311	Employability	To learn about the quantity theory of money
512	PUBLIC ECONOMICS - I	1931312	Employability ,Skill Development	To analyse the theories, structure, growth & appraisal of public expenditure policy
513	INTERNATIONAL ECONOMICS - I	1931313	Employability	To understand and evaluate the need for collusion and integration in international trade.
514	FINANCIAL MARKETS & SERVICES - I	1931314	Employability	Competence to excel in competitive Civil Services and SET, NET, Ph.D examinations
515	ENTREPRENURIAL DEVELOPMENT	1931315	Employability ,Skill Development,Entrepreneurship	To understand the various concepts related to pricing and distribution
516	MACRO ECONOMIC THEORY - II	1931416	Employability	They can differentiate a normal versesgalloping price level in the economy and also familiar with controlling techniques of inflation
517	PUBLIC ECONOMICS - II	1931417	Employability	Discuss the problems of state indebtedness & recommendations of latest finance commission
518	FINANCIAL MARKETS AND SERVICES - II	1931420	Employability	To understand the need for Venture Capital finance, in promoting investments in large investment projects.
519	HUMAN RESOURCE MANAGEMENT	1931420	Employability	To associate with various concepts of wage salary administration, demotion & grievance handling and promises employability at both private and public sector enterprises
MSW - 33				
520	SOCIAL WORK PROFESSION	2033101	Employability ,Skill Development	Become socially responsible and value driven social workers and committed to sustainable development in the society
521	WORKING WITH INDIVIDUALS	2033102	Employability, Entrepreneurship	Practically apply case work method in different settings like schools, industries, with aged people, disabled and the LGBTQIA community to make best use of this method of social work
522	WORKING WITH GROUPS	2033103	Employability ,Skill Development	Explicate group dynamics.
523	HUMAN BEHAVIOUR	2033104	Employability ,Skill Development	Critically analyze the existing theories of society through the basic concepts of culture, social stratification, socialization & social institutions.
524	SOCIAL WORK RESEARCH	2033206	Enterpreneurship,Skill Development	Use computer applications in the presentation of data and prepare social work research reports with skills in thesis writing.
525	WORKING WITH COMMUNITIES	2033207	Employability ,Skill Development,Entrepreneurship	Demonstrate the skills in community organization and Social Action like Communication, Advocacy, Networking, Assessment etc.
526	SOCIAL WELFARE ADMINISTRATION AND SOCIAL LEGISLATION	2033208	Employability ,Skill Development,Entrepreneurship	Examine social legislation as an instrument of social control and social justice with respect to fundamental rights and directive principles.
527	ENTREPRENEURSHIP	2033209 (A)	Employability ,Skill Development,Entrepreneurship	Identify the feasibility of entrepreneurship in India.



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528	MANAGERIAL BUSINESS COMMUNICATION	2033209(B)	Employability, Entrepreneurship	Understand the concept Business Environment, Goal of Finance Management and Blocks of Modern Finance.
529	LABOUR LEGISLATION	1933311	Employability, Entrepreneurship	To equip to handle industrial disputes with detailed knowledge of actual organization scenarios and long-term impact of resolutions of both employees and employer
530	HUMAN RESOURCE MANAGEMENT	1933312	Employability ,Skill Development,Entrepreneurship	To understand HRM and the role of HRM in effective business administration
531	WORK PLACE COUNSELING	1933313	Employability ,Skill Development	Understand and apply the counselling process in different settings
533	EMPLOYEE RELATIONS MANAGEMENT	1933314	Entrepreneurship,Skill Development	Understand the industrial disputes and its mechanism
534	STRATEGIC HUMAN RESOURCE MANAGEMENT	1933416	Employability ,Skill Development,Entrepreneurship	To enable students to explore the strategic innovation and strategic transformation
535	TRENDS IN HUMAN RESOURCE DEVELOPMENT	1933417	Employability ,Skill Development,Entrepreneurship	To equip students to develop themselves into a critically reflective and capable HRD Practitioner,or a manger who can facilitate the learning of others
536	ORGANISATIONAL BEHAVIOUR & ORGANISATIONAL DEVELOPMENT	1933418	Entrepreneurship,Skill Development	To enable the students to perceive and develop the attitude required for the successful application of Personal management and organizational behavior
	M.A. HRM - 34			
537	MANAGERIAL CONCEPT AND BUSINESS ETHICS	2034101	Employability, Skill Development, Entrepreneurship	CO 1 Demonstrate the descriptive knowledge of basic principles of management, and communicate the management evolution and how it will affect the task and functions of future managers. CO2 Observe and critically evaluate the influence of historical forces on the current practice of management. CO3 Practice the process of managements functions of planning, organizing , staffing,directing,controlling, reporting and budgeting. CO4 Demonstrate an ability to critically examine how organizations adapt to an uncertain environment and identify techniques managers use to influence and control the internal environment CO5Critically evaluate the role of professional manager in Delegation of Authority and decentralization and in the emerging trends incorporate structure and culture. CO6 Identify and properly use vocabularies within the field of management to articulate one's own position on a specific management issue and communicate effectively with varied levels of human resources



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538	HUMAN BEHAVIOUR	2034103	Employability, Skill Development, Entrepreneurship	CO 1 Appreciate the human element and dimensions in employee behavior by applying different psychological theories for Human Resource management and human resource Development. CO2 Exhibit the ability to relate with the employees by using the principles of human development,lifespan development and to facilitate occupational and career adjustment needs in the organization. CO3 Develop skills in the assessment and prevention of human errors related to Industrial accidents by applying the concepts Sensation and Perception.CO4 Recognize and apply different memory improvement techniques for personal, professional,organizational and effective team functioning CO5 Identify, choose or develop tools/psychological tests for measuring intelligence,aptitude,skills,competencies,required for human performance in different functions of Human resourceManagement such as recruitment,selection, training and development,performance appraisal etc
539	LABOUR LEGISLATIONS	2034104	Employability, Skill Development, Entrepreneurship	CO 1 As a HR professional the person will be able to work independently for filing Factory License,EPFand ESI Online Portals for employee registration and monthly contribution CO2 HR student became industry ready with realtime cases practices from the classroom discussions CO3 After the graduation the student can work onWorking hours and Overtime calculation,Annual leave with wages calculation CO4 Calculating essential HR metrics like OT,Working hours,Annual Leave with wages etc.CO5 Effective Labour Grievance handling and decision making as per statutorycomplianceguidelines
540	LEARNING AND DEVELOPMENT	2034206	Employability, Skill Development, Entrepreneurship	CO1 Differentiate the concepts of Learning,Training&Development and explain the relevance of Training in Human Resource Development. CO2 : Compare and apply the Adult Learning theories for employee training and productivity in organizations. CO3 : Describe the various aspects of Training process such us training need analysis, training design,training environment,training content,trainer capabilities,training methodologies and training evaluation for Training and Development functions inany groups or organizations. Design, evaluate and deliver training programmeseffectivelyusing various models of training and development. CO4 : Classify and critically evaluate different methods of Management Development Programmes for executive development. CO5 : Analyze the importance of HR professional bodies (eg:ISTD,NHRD) ,avail membership and participate in their professional meets. CO6 : Compare the various technological advancements and tools in Training and development and explain the latest trends andgovernment initistement.



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541	ORGANISATIONAL BEHAVIOUR	2034208	Employability, Skill Development, Entrepreneurship	CO1 Appreciate the human element and dimensions in employee behavior by applying different psychological theories for Human Resource management and human resource Development. CO2 : Exhibit the ability to relate with the employees by using the principles of human development,lifespan development and to facilitate occupational and career adjustment needs in the organization.CO3 : Develop skills in the assessment and prevention of human errors related to Industrial accidents by applying the concepts Sensation and Perception CO4 : Recognize and apply different memory improvement techniques for personal, professional,organizational and effective team functioning...CO5 : Identify, choose or develop tools/psychological tests for measuring intelligence,aptitude,skills,competencies,required for human performance in different functions of Human resource Management such as recruitment,selection, training and development,performance appraisal etc.
542	PERFORMANCE MANAGEMENT SYSTEM	2034209	Employability, Skill Development, Entrepreneurship	CO1 : Appreciate and recognise the significance of different kinds of Performance Appraisal systems CO 2: To compare and contrast the different appraisal processes and managing performances CO3 : Will be able develop a performance development model for a Company with diversified manpower CO4 : Will be able to devise communication mechanism for facilitating performance review CO5 : To evaluate and assess the present relevance of PMS
543	CORPORATE SOCIAL RESPONSIBILITY	2034210	Employability, Skill Development, Entrepreneurship	CO1 : Recognize and appreciate the social, ethical and moral responsibility of organizations in extending organizational benefits to the society CO2 : Match organizational policies/needs with CSR programs and to be able to critically evaluate it CO3 : Use Modern tools of CSR to promote Environmental Sustainability and achieve ethical acceptability CO4 : Derive CSR models and policies for both Business and Organizational commitments towards philosophies,principles andpractices of CSR. CO5 Measure the impact of CSR on direct and indirect stakeholders.
544	ORGANISATIONAL COUNSELING	2034211	Employability, Skill Development, Entrepreneurship	CO 1 : Exhibit the values and ethics of counseling goals and practices of counseling method CO2 : Identify and apply various counseling theories and models to interpret the psychological and emotional needs of the employees at workplace. CO3 : Assess different psychosocial problems of the employees at workplace and to devise a plan to help them to overcome their problems through various counseling approaches and also to preserve and promote Mental Health at workplace by using counseling methods. CO4 : Develop and utilize the skills of Organizational Counseling such as active listening, paraphrasing,summarizing,counseling therapies,etc in the counseling process CO5 : Establish and run effective professional counseling service in the industries.



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545	ORGANISATIONAL DEVELOPMENT	1934419	Employability, Skill Development, Entrepreneurship	CO1 : Will be able to design and execute organisational changes such as policy, organizational structure, culture, management through training and development, management games. CO2 : This course builds self-confidence to the student to establish a business on OD consultant or HR consultant for implementing HR practices efficiently. CO3 : The skills and abilities trained to the student help them to become a team building coach or skilled HR professional to moderate high performing teams CO4 : The ability to handle and implement change in the organisation as a change agent. CO5 : The course builds capacity to bridge the relationship between employer and the employee in the organisation as HR professional
546	STRATEGIC HUMAN RESOURCE MANAGEMENT	1934313	Employability, Skill Development, Entrepreneurship	CO1 Classify the different types of Corporate, Business and Functional Strategies and facilitate organizations to align their business goals with HRM objectives. CO2 : Explain the concepts of Strategic Human Resource Management, importance of SHRM in the present competitive world and critical role of HR managers incorporate management CO3 : Analyse and Evaluate various recruitment, retention and training and development strategies and choose the appropriate ones for a given situation. CO4 : Analyse and Evaluate various performance management, rewards and retrenchment strategies and choose the appropriate ones for a given situation CO5 : Describe the management trends and use the new strategic management tools in industries to gain a competitive advantage.
547	HUMAN RESOURCE DEVELOPMENT	1934314	Employability, Skill Development, Entrepreneurship	CO1 Develop a Career development model improvising the existing model CO2 : Demonstrate the ability to create HR metrics to create tools to prepare work force analytics CO3 Develop insight into contemporary HR issues. CO4 : Ability to compete and excel in multicultural and multilingual workforce or organisations CO5 : Clarity in imparting cross cultural training in MNC's. Mapping of COv/sPO: PO1 PO2



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548	INDUSTRIAL LAW	1934315	Employability, Skill Development, Entrepreneurship	CO1 Analyzing Indian constitutional provisions and explaining the approaches to the study of Industrial law CO2 : Examining the Fundamental Rights and Duties of Indian citizens with a study of the significance and status of Directive Principles examining the essence of the preamble CO3 : Apply the statutory provisions pertaining to Shops and establishment, Contract labours and employment of child labour CO4 : Examine the social implication, purpose and procedure to get benefit out of sexual harassment (Grievance and Redressal) Act and Right to Information legislation CO5 : Demonstrate an ability to critically examine the values and policy considerations involved in Industrial Law ; resolve problem-based questions on industrial law issues which involve applying relevant labour law cases and statutes CO6 : Demonstrate an understanding in salient provisions of Apprentice Act, the NEEM scheme and legislations pertaining to remuneration
549	MANAGERIAL ECONOMICS	1934317	Employability, Skill Development, Entrepreneurship	CO1 : Develop Knowledge about the Nature and Scope of Managerial Economics and its relationship with other areas of economics such as Production Management, Marketing, Finance and Operation research CO2 : Illustrate the basic economic principles such as discounting principle, opportunity cost, incremental concept, scarcity, marginalism and equi marginalism. CO3 : Conceptualize the theory of Demand and Supply, Market Equilibrium, Price Ceiling and Price Floor CO4 : Compare and Contrast the Changes in Demand and Supply, Price and Cross Price Elasticity CO5 : Assess the growth of Industrial sector in Pre and Post reform period, growth and pattern of Micro, Small and Medium enterprises. CO6 : Analyse the problems in MSMEs, India's exports, employment generation, policies pertaining to women workers in India as well regional imbalance and labour turnover
550	COMPENSATION BENEFITS ANALYSIS	1934316	Employability, Skill Development, Entrepreneurship	CO1 : Practically derive a compensation mechanism considering the forces involved. CO2 : Apply the methods of fixing methods of Compensation to an employee. CO3 : Apply the statutory provisions pertaining to Shops, Contract labours and employment of child labour CO4 : Compare and understand the pay variations for expatriates CO5 : Demonstrate the ability to analyse the CPI and WPI and its practical implications
551	GLOBAL HRM	1934418	Employability, Skill Development, Entrepreneurship	CO1 : Understand the different phases of Globalization CO2 : Global impact across different Sectors CO3 : Agreements and implications of various international organisations CO4 : Develop sensitivity in cultural variations and business propositions



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552	RESEARCH METHODOLOGY	1934312	Employability, Skill Development, Entrepreneurship	CO1 : Effective decision making, strategic planning and execution based on reliable and accurate database will be able to do it with the research methodology tools and methods. CO2 : Problem solving by adopting different variables by framing hypothesis to assess and analyse the relationship, association and impacts of any issue in an organization to understand cause and effect CO3 : Internal skillgap will be able to fulfill with analysis reports of skill matrix or future projects. Such analysis report can be done by collecting database to predict the future market. CO4 : As a HR person can able to analyse the data's and draw output with scientific testing tools and methods CO5 : Methods like action research ensures collection of data on customer feedback, employee's satisfaction with the methods like interview, questionnaires. Time to time it supports to evaluate the performance and to frame objective of the organization
553	TOTAL QUALITY MANAGEMENT	1934419	Employability, Skill Development, Entrepreneurship	CO1 : Describe the basic concepts, dimensions and Framework of Total Quality Management. CO2 Analyze and apply the various principles of Total quality management and List The prestigious Quality Awards and work towards getting such awards in organizations CO3 Classify, compare and use the various tools and techniques of Total Quality Management aligned with Human Resource Management Functions. CO4 : Associate the concept of Quality circle with Human Resource Development and form such employee groups in organizations. CO5 : Explain the ISO standards relating to Quality and Environment Management systems and support the organization in achieving these certifications
554	FUNDAMENTALS OF HUMAN RESOURCE MANAGEMENT	2034105	Employability, Skill Development, Entrepreneurship	CO1 : Explain the importance of Human resource and their effective management of the organization of different sectors in this contemporary environment and the ability to solve the problems arising in the organization. CO2 : Demonstrate the ability to prepare a recruitment and selection strategy for matching the organizational needs and skills of potential and perspective candidates. This includes searching and researching the different sources of recruitment, the advantages and disadvantages of each type that will best suit the organization. CO3 : Develop, analyze, organize, conduct and evaluate different training and development methods in a cost effective way to suffice the needs of the organization and employees. CO4 Summarize the fundamental concepts, principles, techniques, Judgments in supply and demand forecasting in determining manpower planning. CO5 : Compare and contrast the different methods of performance appraisal and to identify the best unbiased method to evaluate the performance of the employees to perform and shine in all the fields



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555	INDUSTRIAL RELATIONS AND EMPLOYEE WELFARE	2034206	Employability, Skill Development, Entrepreneurship	CO1 : Demonstrate descriptive knowledge of the field of Industrial Relations, and enactment pertaining Industrial disputes, Trade Unions, and Employment Standing Orders. CO2 : Apply the essential concepts of Trade Unions to compare and contrast the functions, structure, democracy and status with developed countries. CO3 : Identify, evaluate, recognize the types of Industrial approaches and consider the social historical and equity within Industrial Relations. CO4 : Demonstrate an ability to critically examine and Investigate solutions to Industrial Problems through Machinery and Collective Bargaining, Negotiation process based on research study and Assessment of current practices. CO5 : Practice the process of Industrial Relations and Communicate the knowledge of Industrial Relations in both written and verbal methods to employer and employee to maintain Industrial harmony and Conflict Management.
556	ENTREPRENEURSHIP FOR BUSINESS AND HUMAN RESOURCE MANAGEMENT	1934420	Employability, Skill Development, Entrepreneurship	Demonstrate with regard to Start-ups Project Formulation and also steps involved in setting up a new business. Develop a clear understanding about GST and also working capital
B.COM HONOURS - 35				
557	FINANCIAL ACCOUNTING I	2035111	Employability	Students can able to prepare financial statements of sole trading concern and Non Profit Organization in accordance with appropriate manner. Students can compute the value of depreciation under different methods and compare the same. Students can able to ascertain the profit and loss of a business (when it doesn't have complete accounting data). Students can assess the amount of claim to be made to the insurance company on the occurrence of fire.
558	FINANCIAL ANALYTICS & CONTROL (CMA 1A)	2035112	Employability, Entrepreneurship, Skill Development	Students will be able to define cost behaviour and types of costs Students will be able to classify costing systems and compare different types of costs. Students will be able to solve problems in supply chain management Students will be able to conclude and criticise on the basis of internal auditing Students will be able to develop and create a business continuity plan Students will be able to understand information systems and data control Students will be able to understand data analytics and visualization



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559	MODERN BANKING	2035113	Employability	<p>Students can able to apply the knowledge of banking in practical life.</p> <p>Students can able to identify the various sources of lending and also know the procedure to apply for it.</p> <p>Students can able to measure the credit control techniques used by RBI.</p> <p>Students can able to know how to utilize the various types of Negotiable instruments.</p> <p>Students can able to lodge grievances and also know the proceedings of it.</p> <p>Students can able to select and apply appropriate E-banking techniques based on the nature of transactions.</p>
560	BUSINESS ECONOMICS	2035114	Employability	<p>Students can able to explain basic economic philosophies relating wealth, welfare, scarcity and growth developed by various economists.</p> <p>Students can able to analyze how households (Demand) and business (Supply) interact in various market structure to determine price and quantity of good produced.</p> <p>Students can able to apply the utility analysis in practical situations.</p> <p>Students can able to analyze the impact of cost in production.</p> <p>Students can able to determine the price and output level to maximize profit under different competitive market structure.</p>
561	CORPORATE COMMUNICATION	2035115	Employability, Skill Development	<p>Students can able to know how to overcome the barriers while communicating</p> <p>Students can able to utilize modern tools of communication.</p> <p>Students can able to draft letters for the business correspondence.</p> <p>Students can able to present themselves appropriately in a public domain.</p>
562	FINANCIAL ACCOUNTING II	2035216	Employability	<p>Able to assess the amount of interest to be paid while purchase made on Hire purchase system and Instalment.</p> <p>Able to prepare different Branch account for different types of branches.</p> <p>Able to reconstitute the Books of accounts during Admission, Retirement, Death of a Partnership Firm.</p> <p>Knowing the procedures that students can able to make the settlement to the external and internal liability as per the Indian Partnership Act, 1932.</p>



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563	FINANCIAL PLANNING & PERFORMANCE	2035217	Employability, Skill Development	<p>Students will be able to understand strategic planning and budgeting and recall the models of strategic planning with the process</p> <p>Students will be able to classify forecasting techniques and demonstrate the budget</p> <p>Students will be able to make use of budget to prepare an annual profit plan</p> <p>Students will be able to analyze performance by using flexible budgets and compare actual results to planned results</p> <p>Students will be able to explain the importance and use of standard cost systems</p> <p>Students will be able to propose performance measures and discuss key performance indicators</p>
564	PRINCIPLES OF MANAGEMENT	2035218	Employability, Skill Development	<p>Students can discuss and communicate the evolution and philosophies of management.</p> <p>Students can able to practice the process of core management functions viz planning, Organizing, leading, controlling etc.,</p> <p>Students can able to use the motivational theories in their business to evoke the best performance of the employees.</p> <p>Students can evaluate the various leadership styles & adopt the best one in their business at different situation.</p> <p>Students can outline the latest management techniques which help them to select and apply best technique to manage their business effectively and efficiently.</p>
565	BUSINESS POLICY AND ENVIRONMENT	2035220	Entrepreneurship	<p>Students can able to apply the knowledge of business policy, and also enable them to understand the importance of looking at the organization as a unified whole.</p> <p>Students can able to forecast the environment which affects the future trends of the business.</p> <p>Students can able to discuss and define the factors that shape the SWOT analysis of a firm and develop an environment appraisal that will lead to formulation of strategic plans.</p> <p>Students can able to give Managerial Response to Changes in the External Business Environment.</p> <p>Students can able to apply ethical principles to commit professional ethics and responsibilities in accordance with the norms of business policies.</p> <p>Students can able to suggest the management to utilize the driving forces optimally to enter into foreign country to expand the business.</p>



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566	CUSTOMER RELATIONSHIP MANAGEMENT	2035220	Employability	An outline and revision on concepts regarding CRM. Students can segment their customers and also maintain long-term relationship with their customers by using success chain formula. Students can plan to build loyalty among the customers through best campaigning methods. Students can design and implement fair reward system in their business. Integrate and implement various technology utilized for the development of CRM.
567	BUSINESS MATHEMATICS	1935321	Employability	Students can able to attain basic knowledge & mathematical skills in set theory, relations, functions & matrices and also enhance the logical & critical thinking and problem solving skills in ratio, proportion, series & different calculus which has real time applications.
568	COMPANY LAW	1935322	Employability	Students will be able to understand the line items of financial statements and prepare financial statements according to US GAAP and IFRS.
569	COST ACCOUNTING	1935323	Employability	Students will be able to identify the relationship between risk and return and utilize the knowledge of long term financial management.
570	INSURANCE & RISK MANAGEMENT	1935324	Employability	Students can able to explain the essential elements of insurance, significance of LIC & GIC and can able to identify the risk and know how to manage it
571	FINANCIAL REPORTING	1935325	Employability, Skill Development	Students will be able to understand the line items of financial statements and prepare financial statements according to US GAAP and IFRS.
572	STRATEGIC FINANCIAL MANAGEMENT I	1935326	Entrepreneurship	Students will be able to identify the relationship between risk and return and utilize the knowledge of long term financial management.
573	BUSINESS STATISTICS & OPERATIONS RESEARCH	1935427	Employability	Students can able to summarize the data numerically & build models according to the data, apply the necessary tools of inference to obtain the requirement, develop linear programming models & solve problems geographically and finding optimal solution in transportation & assignment problems.
574	FINANCIAL SERVICES	1935428	Employability	Students can able to explain the various types of financial services and evaluate the significance of the same
575	INTERNATIONAL TRADE	1935429	Employability	Students can able to examine the procedures for export and import and also able to demonstrate the significance of international agencies such as IMF, IFC and World Bank.
576	STRATEGIC FINANCIAL MANAGEMENT II	1935430	Employability	Students will be able to identify a system of investment decision and develop stages of capital budgeting
577	MARKETING	1935431	Employability	Students can able to classify the whole market into homogeneous aspects and also able to build strategies for product, pricing, place and physical distribution.
578	HUMAN RESOURCE MANAGEMENT	1935432	Employability, Skill Development	Students can able to apply the knowledge such as process of recruitment, selection, training & development, performance appraisal in their organization.



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579	ACCOUNTING FOR DECISION MAKING	1835534	Employability	Students can able to prepare cash flows statement, funds flow statement and budgeting for an organization and also able to calculate & interpret the financial statement through ratio analysis
580	CORPORATE ETHICS AND GOVERNANCE	1835535	Entrepreneurship	Students can able to demonstrate the significance of ethical practices, social responsibility and governance
581	DIRECT TAXATION - I	1835536	Employability	Students can able to determine the residential status, income from salary, house property and business & profession
582	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	1835537	Employability	Students can able to explain and analyze the elements of logistics and supply chain management for the business
583	ENTREPRENEURIAL DEVELOPMENT	1835538	Entrepreneurship	Students can able to highlight the qualities of successful entrepreneur and also able to identify the challenges and suggest the solutions for it.
584	RESEARCH METHODOLOGY	1835539	Employability	Students can able to explain the appropriate methodology to conduct a successful research
585	FINANCIAL MANAGEMENT	1835641	Employability	Students can able to manage the finance of an organization effectively and efficiently and also able to take a decision with respect to capital, dividend and investment.
586	DIRECT TAXATION - II	1835642	Employability, Skill Development	Students can able to determine the taxable income of an individual and their tax liability
587	INDIRECT TAXATION	1835643	Employability	Students can able to determine the value of GST payable and also able to calculate the amount of customs duty
588	CUSTOMER RELATIONSHIP MANAGEMENT	1835644	Employability	Students can able to explain the significance of customer relationship management practices in a business
589	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	1835645	Employability	Students can able to plan their investment by analyzing various avenues and also know how to manage their portfolio
590				
591				
	B.SC., MATHEMATICS WITH CA - 36			
592	CLASSICAL ALGEBRA	20036101	Employability	CO1 Explain the concept of binomial, exponential and logarithmic series and discuss other forms of binomial expansion, summation of series using binomial, exponential and logarithmic series. CO2 Describe theory of equations and explain the relation between the roots and coefficients of an equation, define symmetric function and the roots of the function. CO3 Solve reciprocal equations and using diminishing of roots to transform an equation, and State Descartes's rule of signs, Apply Newton's method and Horner's method to find roots of polynomial equations.CO4 Classify different types of matrices and their properties, find the Eigen values and Eigen vectors of a matrix and compute inverse of the matrix using Cayley Hamilton theorem.CO5 Use Fermat's& Euler's theorems to solve congruence equation, find the sum and number of all divisors of N, and define congruence and their properties.



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593	DIFFERENTIAL CALCULUS	20036102	Employability	<p>CO1 Retrieve the concept of differentiation and perceive the idea of finding nth derivative using Leibnitz theorem. Find the derivatives of nested functions –chain rule. Choose the chain rule to find the derivatives of implicit function and total differentiation. CO2 Determine the derivative for a function of several variables in partial forms– Jacobian matrix. Examine the maxima and minima for the function of two variables, Implement the idea of maxima and minima for functions subject to the constraints (Lagrange Multipliers). CO3 Attaining the knowledge of finding the angle between radius vector and tangent to the curve. Infers the bending of the curve by finding the radius of curvature in both Cartesian and polar form. Extend the idea of tangent to a curve to find the radius of curvature for pedal curve. CO4 Recall the concept of radius of curvature and tangent to find the center of curvature.Examine the locus of center of curvature to calculate the Evolute. Survey the family of curves to find an envelope.stem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and</p>
594	PROGRAMMING IN C	20036103	Employability / Skill Development	<p>CO1 Understand the basic elements of C language, Do simple programs in C &Get familiar with I/O Statements. CO2 Learn control statements and its importance, Learn Looping statements and its significance, and Understand difference between Conditional and Unconditional statements. CO3 Know the importance of Arrays and Strings, Do programs on arrays and strings and Learn about functions and its types. CO4 Understand the Structure/Union/Pointer concepts, To do programs in Pointers as well as Structures, Difference between Structures and Union and Difference between Arrays and Pointer. CO5 Understand the various File Handling Techniques in C, Learn about different operations on Files in C and Do programs on Files in C</p>
595	NME I - STATISTCAL METHODS	20036103	Employability	<p>CO1 Explain the basic concepts of measures of central tendency and Estimate the mean,mode, median for the given data. CO2 Estimate variation for distributions using quartile deviations, Compare the variability of two or more series using coefficient of variation and Explain the various measures of dispersion. CO3 Demonstrate correlation and regression relations between the data, Estimate the unknown values using regression equations, and Evaluate the correlation coefficient with the help of regression coefficients. CO4 Prepare the Index Numbers for the given data, and Explain the various reversibility tests to be satisfied by a good index number. CO5 Use the past observations to estimate the future values using time series, Appraise the trend values using different methods, Explain mathematical and statistical literatures of various types, including survey articles.</p>



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596	TRIGONOMETRY	20036104	Employability	CO1 Use Demoivre's theorem to expand $\sin n\theta$ & $\cos n\theta$, express $\sin n\theta$ & $\cos n\theta$ in multiples of θ and also can express \sin , \cos and \tan in terms of $e^{i\theta}$. CO2 Express hyperbolic functions in terms of exponential functions, obtain hyperbolic identities, manipulate expressions involving hyperbolic functions and classify relation between circular and hyperbolic functions. CO3 Express inverse trigonometric functions in terms of logarithmic functions, differentiate hyperbolic, inverse – hyperbolic trigonometric functions and separate the real and imaginary parts of trigonometric functions of complex variable. CO4 Recognize the concept of logarithmic of complex numbers and estimate sum of series of sines and cosines of n terms in A.P. CO5 Manipulate any forms of summation of series such as binomial, logarithmic, geometric and Gregory's series and recognize the concept of $C+iS$ method
597	INTEGRAL CALCULUS	20036208	Employability	CO1 Identify the various techniques of integration and apply them to integrate rational and irrational functions. CO2 List the Properties of definite Integrals and evaluate definite integrals using these properties easily. Apply the technique of integration by parts and integrate. CO3 Summarize Bernoulli's formula and Evaluate Integrals using the same. Prove the reduction formulae for Standard functions and use the same to solve problems on standard integrals. Analyze Definite integral as area under the curve using summation and limits. CO4 Classify double and triple integrals and evaluate them. Solve double integrals by changing order of Integration. Use Polar coordinate system to solve Calculus application problems. Evaluate the area of plane surfaces and Volume of Solids using double and triple Integrals. CO5 Define Beta and Gamma Functions, summarize their properties and Use them to integrate complex functions. Derive the recurrence formula For Gamma functions, and Relation between Beta and Gamma functionst
598	BJECT ORIENTED PROGRAMMING WITH C++	20036209	Employability/Skill Development	CO1 Demonstrate the basic elements of C++ language, Discuss and analyze the concept of Object Oriented Programming, Prepare simple programs in C++ , Get familiar with I/O Statements in C++ . CO2 Explain control statements and its importance, Explain Looping statements and its significance, Prepare programs on arrays and strings in C++ and Demonstrate arrays and functions in C++. CO3 Know the importance Classes and Objects, and Learn about Constructor and its types.CO4 Demonstrate the concept of Operator Overloading and its types, Learn the concept of Inheritance and its different types, Analyze the concept of reusability in OOP(Object Oriented Programming) and Prepare programs on Inheritance. CO5 Learn the Importance of Pointers in C++, Prepare programs using Pointers in OOPs concept, Demonstrate the various File Handling Techniques in C++, Learn about different operations on Files in C++ and Prepare programs on Files in C++



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599	NME II - DISCRETE MATHEMATICS	20036211	Employability	CO1 Define Boolean algebra, Identify whether the given set is a Boolean algebra or not with reasons, Illustrate the properties of Boolean algebra, Define two element Boolean algebra, and Interpret the equality of Boolean expressions. CO2 Analyze Boolean expression, Estimate the min terms and max terms in Boolean expressions, Obtaining the canonical form of Boolean logic (disjunctive normal form and conjunctive normal form). CO3 Define and describe the basic ideas in circuits, Apply of Boolean logic for simplification of circuits and for designing of switching circuits. CO4 Associate the Boolean operation with logic gates, Draw circuits from Boolean expression and vice versa, And Determine the equivalency in logic circuits. CO5 Recall sequence and define recurrence relation, Solve recurrence relation by iteration method, and Solve linear difference equations with constant coefficients.
600	DIFFERENTIAL EQUATIONS	19036312	Employability	CO1 Discuss the differential equation of first order and higher degree of the form Define the necessary and sufficient condition for exact equation. Convert differential equation which are not exact into exact equation. CO2 Estimate solution to second order linear homogeneous Differential Equations with constant coefficient. And Illustrate the basic knowledge of complementary function and particular integral. CO3 Estimate solution to second order Differential Equation with variable coefficient. Use the method "Variation of parameter" to find the solution of higher order D.E with variable coefficient. CO4 Discuss the solution for PDE of standard type by eliminating the arbitrary constant and arbitrary function, complete integral, singular integral and general integral. And Evaluate the solution of Clairaut's form and linear partial differential equations. CO5 Define homogeneous equation and Solve the homogeneous linear partial differential equation with particular integrals
601	MATHEMATICAL STATISTICS	19036313	Employability	CO1 Illustrate and describe sample spaces and events for random experiments. Interpret and calculate probabilities of event in discrete sample spaces and conditional probabilities of events using Baye's theorem. CO2 Illustrate the concept of a probability distribution. Sketch the same to real world problems involving various distributions like Binomial, Poisson and Normal distribution. CO3 Measure and analyze the strength of the relationship between two variable using a correlation analysis. Predict the value of any independent variable to the value of dependent variable using linear regression analysis. CO4 Categorize small and large samples. Produce a significant test of hypothesis concerning the value of population mean based on Normal distribution. CO5 Produce a significant test of hypothesis concerning the value of population mean based on t-distribution, F-test, -test. Explain the concept of analysis of variance and use them to investigate factorial dependence Discuss about goodness of fit for given datst



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602	MULTIMEDIA	19036314	Employability	<p>CO1 Define the common multimedia terms and qualify its characteristics in terms of linear and non-linear content. Categorize the applications of Multimedia in several different environments that provide the benefit over other forms of information presentation. Demonstrate the importance of text and the ways in which the text can be leveraged in multimedia presentation. CO2 Differentiate the use of MIDI and Digital Audio in multimedia production. Differentiate among bitmap, vector and 3D images by describing their capabilities and limitations. Point out the considerations involved in managing audio file and integrating them into multimedia project. CO3 Define Animation and demonstrate the principle and uses of animation in multimedia. Classify the types of Animation Techniques and create a computer generated scene from multiple still images. Judge and classify on selecting the best video recording formats for multimedia project. CO4 Demonstrate the intangible elements needed to make good multimedia. Point out thstem.</p> <p>ect and shine in all the fields plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule and control project activities</p> <p>listener, place, time, use, premise, fact, residue, object, field, etc., to be incorporated and used. து இயல்களுக்கும் பொதுவான செய்திகள் அனைத்தும் இவ்வியலில்</p>
603	NUMERICAL METHODS - I	19036315	Skill Development	<p>CO1 Restate the principal of least curves, Solve the problems of fitting of straight lines, parabolas and different form of exponential curves. CO2 Solve algebraic equations using various methods like Bisection method, Iteration method, Regula-Falsi method and Newton – Raphson’s method. CO3 Estimate the solution of simultaneous linear equations using direct methods: Gauss-elimination method , Gauss –Jordan method and Crout’s method . Estimate the solution of simultaneous linear equations using Iterative method :Gauss-Siedel. CO4 Define basic concept of operators .Differentiate the factorial polynomial. Solving interpolation with equal intervals problems using Gregory Newton’s forward formula and Newton’s backward formula and Estimate the missing value for the equidistant terms. CO5 Explain the operators and relation with the operator, Estimate the solution of central difference formula using the methods Gauss’s forward, backward formula, Stirling’s formula, Bessel’s formula and Laplace Everett formula.</p>



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604	VECTOR CALCULUS, ANALYTICAL GEOMETRY OF THREE DIMENSIONS	19036417	Employability	<p>CO1 Restate Gradient, Curl and Divergent .Solve the problems of directional derivatives. Solve the problems of unit normal to the surface. CO2 Define line, surface and volume. Estimate the integration using Gauss, Stoke's, Green's theorems. CO3 Restate general equation of plane. Estimate the equation of a plane passing through three points. Solve the problem of intercept form and normal form. Explain angle between two planes. Distinguish between condition of perpendicularity and parallelism. Demonstrate the equations from perpendicular distance form a point to a give plane, equation of plane pausing through the line of interchange of two planes. Solve problems on ratio in which the plane divides the line joining the two points. CO4 Define general equation of the straight line, Symmetric, transformation. Explain angle between plane and line. Identify conditions of a line. Solve problems on parallel to the plane and two lie a plane. Classify coplanar lines, intersection of two given, skew lines and short distanstem.</p> <p>ect and shine in all the fields plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule and control project activities</p>
605	TRANSFORMS AND FOURIER SERIES	19036418	Employability	<p>CO1 Use Laplace transform and Inverse Laplace transform in solving differential equations with constant coefficients. Differentiate between Laplace transform and Inverse Laplace transform. Demonstrate the concept of Laplace transform and Inverse Laplace transform by giving examples and classify it. CO2 Demonstrate the Fourier series to study the behavior of Periodic functions and their applications. Evaluate the problems in Fourier series using periodic functions. CO3 Categorize Even and odd functions and Classify half range Fourier series. CO4 Understand Fourier Integral theorem and evaluate problems under Integrals using the theorem. CO5 Analyze and understand infinite Fourier transforms and its inversion properties using convolution and Parseval's identity for Fourier transforms. Evaluate integrals using sine and cosine transforms.</p>
606	PROGRAMMING IN JAVA	19036420	Employability/ Skill Development	<p>CO1 Explain the reason about the evolution of Java its development. Recall the basic of Java and to develop code. Summarize the importance of Java comparing the other language.CO2 Develop program using fields, methods and its types. Categorize different types of decision making and branching. Explain different types of looping. CO3 Explain the concept of interface, threads. Sketch the concept Exception handling in various applications. Judge the significance of exception handling. Define Life cycle of thread. Recall the definition of inheritance and Writing program related to it. CO4 State the Usage of Java in internet, Definition of Applet and Developing code to connect to internet. Demonstrate Life Build Applet code using AWT controls. CO5 Explain I/O streams. Create file using Byte Stream and character Stream classes.</p>



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607	NUMERICAL METHODS - II	19036420	Skill Development	<p>CO1 Define interpolation and extrapolation. Use the Newton's divided difference formula and Lagrange's formulas for interpolation. Construct a polynomial passing through the $(n+1)$ points. CO2 Explain the definitions of Newton's forwards, backward, divided difference and Stirling's formula for numerical differentiation. Prepare the first order second order derivatives from a set of tabulated values. Point out the extreme values of model real time problems. CO3 Demonstrate a definite integral numerically. Summarize the concept of Trapezoidal, Simpson's (1/3), Simpson's (3/8) and Weddle's rules. Compute definite integral from a set of tabulated values by varies numerical integration methods. CO4 Identify linear homogeneous and non-homogeneous difference equations. Distinguish difference equation and differential equation. Formulate first and second order difference equations. Solve first and second order difference equations. CO5 Explain Taylor's series, Euler's method, Modified Euler's method Runge-Kutta methodstem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world</p>
608	ALGEBRAIC STRUCTURES	18036522	Employability	<p>CO1 Summarize the structure of Group, Subgroups, Demonstrate operations satisfying various properties in group structure, and Explain Lagrange's Theorem and its consequences. CO2 Classify and demonstrate examples of subgroups, normal subgroups and quotient groups, Summarize the properties of cyclic subgroups of a group and Explain Isomorphism and homomorphism of Groups.CO3 Explain the notion of permutations and operations on them, Summarize Cayley's theorem and Classify Inner automorphism and their properties. CO4 Define Rings, Integral Domains, Fields and Divisors of Zero, Classify Quotient Rings, Ideals and their existence with examples, and demonstrate their characteristics , Explain Homomorphism and Isomorphism of Rings. CO5 Classify the different types of Ideals and state their properties, Illustrate Imbedding of Integral domain over Field, Identify Euclidean Rings and investigate their properties.</p>
609	REAL ANALYSIS	18036523	Employability	<p>CO1 Describe the fundamental properties of the real numbers that lead to the formal development of real analysis. Define and recognize the basic properties of the field of real numbers. Identify the cardinality of a sets. CO2 Demonstrate an understanding of limits and how that are used in sequences. Explain the basic principles of the convergence of a sequence. List the condition(s) of convergent and divergent of a sequence. CO3 Identify the limit superior and limit inferior of a sequence. Recall the Cauchy definition of a sequence. CO4 Construct rigorous mathematical proofs of convergence test of a sequence. Distinguish between conditional convergence and absolute convergence. CO5 Define the Euclidian distance function and explain the geometric meaning of each of the metric space properties. Demonstrate whether a given distance function is a metric. Point out the value of a limit of a function at a point using definition</p>



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610	DISCRETE MATHEMATICS	18036524	Employability	<p>CO1 Explain the definition of Mathematical logic and analyze statements using truth tables. Differentiate between conjunction and disjunction, conditional and biconditional statements. Formulate an argument using logical notation and determine if the argument is or is not valid. CO2 Distinguish between NAND, NOR and Normal forms. Construct simple mathematical proofs and possess the ability to verify them. CO3 To solve recursive functions in a formal mathematical manner. Classify the algorithm for solving finite order homogeneous and non-homogeneous finite linear relation. Develop problem-solving skills using logical thinking. CO4 Solve problems on generating functions for recurrence relations. Illustrate different types of graphs and explain some definitions and basic theorems. Indicate the concept of degree sequences, Graph isomorphism and operations on graphs. CO5 Apply graph theory-based tools in solving practical problems. Describe Kruskal's and Prim's algorithm in finding minimum weight spanning tree Resstem.</p> <p>ect and shine in all the fields</p>
611	OPERATIONS RESEARCH I	18036525	Employability	<p>CO1 Summarize and Identify the concept of Linear Programming, Formulation of LPP and to solve Graphical method and Simplex method CO2 Classify and demonstrate the examples of Big M method, Summarize the concept of Principle of Duality, Primal and Dual relation and able to solve Dual Simplex method. CO3 Formulate the given Transportation problem into a mathematical model and determine the optimal solution by North West Corner Rule – Vogel's approximation method and matrix minimum method-Procedure for finding optimal solution – Both minimization and maximization cases – Unbalanced and degenerate transportation problems. CO4 Attaining the knowledge and able to solve assignment problem Formulation- Minimization cases –Procedure for getting optimum solution – Unbalanced problem- Maximization problem – Problems with restrictions. CO5 Summarize the concept of Queuing models – States of Queuing system – Steady state analysis of $(M/M/1):(\infty/FCFS)$-(Birth-Death model), $(M/M/1):(\infty/FCFS)$ (General Erlang Queuing Model), $(M/stem)$.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and</p>



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612	WEB TECHNOLOGY	18036526	Employability/ Skill Development	<p>CO1 Define the common Web terms and qualify its characteristics in terms of design, writing and management. Illustrate the concept of registering web pages. Classify the different strategies for searching data on web and summarize their working. Subdivide and explain the different types of Computer Viruses and the ways to prevent it. CO2 Demonstrate the concept of setting the document structure in HTML. Differentiate the ways of formatting text using HTML tags. Explain the process of creating hyperlinks and anchors. Point out the considerations involved on applying Cascading style sheet in HTML script. CO3 Judge and classify on inserting Graphics and selecting different graphics format. Organize the ways of creating navigational aids. Explain the process of creating and formatting tables in HTML. CO4 Utilize the concept of JavaScript and their advantages. Categorize the different types of Operators and Control Structures in JavaScript with examples. Identify the characteristics of function and demonstrate the stem.</p> <p>ect and shine in all the fields plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule</p>
613	LINEAR ALGEBRA	18036228	Employability	<p>CO1 Define Polynomial rings over a field $F[x]$. Demonstrate that $F[x]$ is a Euclidean Ring and is a PID, Describe Polynomial Rings over Commutative Rings ie $R[x]$. Relate the properties of $R[x]$ with that of R and hence Conclude that if R is a UFD then so is $R[x]$. Explain Eisenstein Criteria for irreducibility of Polynomials and apply the same to investigate the irreducibility of given polynomials. CO2 Describe an abstract vector space, Define the terms span, linear independence, basis, dimension, and Discuss their properties Compute Basis and Dimension of Vector Spaces in R^n. CO3 Summarize Vector Space Homomorphisms and Annihilator. Demonstrate that $\text{Hom}(V, W)$ is the dual space for a given vector space V. Define Norm and Orthogonality of vectors and Inner Product Space. Discuss orthogonal and orthonormal basis, Explain the Gram-Schmidt Orthogonalization process, and Construct orthogonal and orthonormal basis for a given basis. CO4 Define Algebra over F. Indicate that $\text{Hom}(V, V)$ is an Algebra over F. Outline the pstem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems.</p> <p>stic Roots and Characteristic Vectors of Linear Transformations in $A(V)$. CO5 Associate Linear Transformations with matrices and represent them using matrix. Demonstrate than F_n the set of all $n \times n$ matrices forms an Associative Algebra over F and hence conclude that $A(V)$ and F_n are isomorphic as algebras over F. Describe matrix of a transformation for a given basis and Demonstrate similarity</p>



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614	COMPLEX ANALYSIS	18036629	Employability	CO1 Judge Analytic function and harmonic function and its properties. Design analytic function. Derive Cauchy Riemann equation and Derive Cauchy Riemann equation in polar form. CO2 Illustrate Cauchy's Integral theorem. Restate derivatives of analytical function. Examine the values of the function using Cauchy's Goursat theorem. Demonstrate Morera's theorem, Maximum moduli functions and Liouville's theorem. CO3 Derive various series for an analytic function. Analyze poles and zeros and estimate the residue at poles. Categorize the singularities. CO4 Evaluates Improper real integrals. CO5 Judge and classify mappings by elementary functions Classify fractional transformation. Discuss various standard transformations.
615	MECHANICS	18036630	Employability	CO1 Understand the Vectorial and scalar representation of forces and moments. Identify basic definitions and categorize Lami's theorem and its Applications. CO2 Explain Static equilibrium of particles and rigid bodies in two dimensions and also in three dimensions. Distinguish problems under moments, parallel forces and couples. CO3 Illustrate the Laws of motion, Kinematics of motion and their Interrelationship. Compare the relationship between Resultant, relative, angular and relative angular velocities. CO4 Recall concepts of projectiles. Differentiate time of flight, horizontal range and range in an inclined plane. CO5 Analyze the properties of surfaces and solids in relation to moment of Inertia. Explain moment of Inertia of simple bodies and theorems of parallel and perpendicular axes. Demonstrate various moments of Inertia of triangular and circular lamina as well as hollow and solid right sphere and cone.
616	OPERATIONS RESEARCH II	18036631	Employability	CO1 Explain the rules for Network constructions. Evaluate time calculation in PERT. Describe PERT algorithm. Distinguish between PERT and CPM. CO2 Explain basic concepts of EOQ models. Apply the decision models to various real time problems. Describe and analyze various models in EOQ. CO3 Discuss about models of replacement. Apply and evaluate the replacement of an item whose maintenance cost increases with time and money value is not changed. Apply and evaluate various models in replacement. CO4 Explain the concept of game theory. Describe and solve the two person zero sum game with and without saddle point. Explain and evaluate dominance rule. Solve $2 \times n$ and $m \times 2$ game by using game theory. CO5 Discuss the concepts of sequencing problem. Describe and solve n jobs -2 machines, n -jobs through 3 machines and n -jobs through n -machines. Apply and solve problems by using graphical method.



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617	DOT NET PROGRAMMING	18036632	Employability/Skill Development	CO1 Demonstrate the concept of setting the document structure in HTML. Differentiate the ways of formatting text using HTML tags. Explain the process of creating hyperlinks and anchors. Point out the considerations involved on applying Cascading style sheet in HTML script. CO2 Detailed framework for controls, menus and dialog boxes related to DOT.NET Illustrate the concept of variables and operators. Subdivide and explain the different types of decision structures and the ways to trap and prevent errors. CO3 Recognize and implement the different types of graphics and animation that can be implemented in VB.net. Demonstrate the concept of setting the document modules and procedures CO4 Utilize the concept of Web Server Controls. Foster the development of ASP.NET language structure. Design and explain the concept of validation controls CO5 Explain the process of creating database and executing it Demonstrate the process of managing cookies and objects associated with it.
B.SC., PHYSICS WITH COMPUTER APPLICATION - 37				
618	MECHANICS AND PROPERTIES OF MATTER	2037101	Employability/Entrepreneurship /Skill Development	CO1 Understand the basics of Newtonian mechanics, displacement, velocity, acceleration and Newton's laws of motion. CO2 Analyze and differentiate the simple and compound pendulum. Understand the dynamics of a system of particles. CO3 In hydrodynamics the derivation of Euler's equation, Bernoulli's theorem and its applications. CO4 Understand the concept of surface tension, viscosity and its variation with temperature. CO5 Know the three types of strain and derive the relation between elastic constants. CO6 Determination of the rigidity modulus of the rod using static torsion method. CO7 Understand the inertial frames, Galilean invariance and postulates of special theory of relativity. CO8 Realize the consequences of Lorentz transformation, significance of mass-energy relation and four vectors. Establish the non-existence of the hypothesized stationary ether through the null result of Michelson-Morley experiment.
619	MATHEMATICS PAPER - I	2036106	Employability/Entrepreneurship /Skill Development	The Student will be able to acquire the skill to Solve real world problems.



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620	THERMAL PHYSICS AND ACOUSTICS	2037203	Employability/Entrepreneurship /Skill Development	CO1 Concept of temperature, its measurement, knowledge in specific heat capacity of solids, liquids and gases. Understanding the benefits of low temperature physics. CO2 Become familiar with various thermodynamic process and work done in each of this process. Have a clear understanding about reversible and irreversible process, working of a Carnot engine, and knowledge. CO3 Derive the expression of thermal conductivity and know the various laws related to black body radiation. CO4 Attain the scientific knowledge about wave motion. CO5 Familiarise with important terms in acoustics like intensity, loudness, reverberation, etc., Gain knowledge about production, detection, properties and uses of ultrasonic waves.
621	MATHEMATICS PAPER - II	2036212	Employability/Entrepreneurship /Skill Development	The Student will be able to acquire the skill to Solve real world problems.
622	OPTICS	1937306	Employability/Entrepreneurship /Skill Development	CO1 To understand the defects in lenses and method to rectify them. CO2 Interference and related experiments. CO3 Diffraction and experimental explanations. CO4 Understand the concept of Polarisation and optical activity. CO5 Principle of LASER and its applications
623	BASIC ELECTRONICS	1937307	Employability/Entrepreneurship /Skill Development	CO1 Understand the concept of band gap energy and classification of materials based on it. Explain the characteristics of P-N junction diode and apply it to construct Half-wave and Full-wave rectifier. CO2 Analyse the transistor characteristics in CE and CB mode. To analyse the working of RC coupled, Class A and Class B power amplifier. CO3 Acquire knowledge about the concept of feedback and explain phase shift and Wien's bridge oscillators. CO4 Design wave shaping circuits such as clippers, clampers and multivibrators. CO5 Analyse the characteristics of special semiconductor devices such as FET, UJT and SCR and understand its real-time applications.
624	DATA STRUCTURES	1937308	Employability/Entrepreneurship /Skill Development	1. Understand and remember algorithms and its analysis procedure. 2. Introduce the concept of data structures through ADT including List, Stack, Queues. 3. To design and implement various data structure algorithms. 4. To introduce various techniques for representation of the data in the real world. 5. To develop application using data structure algorithms.
625	OBJECT ORIENTED PROGRAMMING USING C++	1937309	Employability/Entrepreneurship /Skill Development	1. Describe the OOP approach connection with C++ 2. Apply the concepts of OOP. 3. Illustrate the process of data and file Manipulation.



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626	ATOMIC PHYSICS	1937412	Employability/Entrepreneurship /Skill Development	CO1 Acknowledge electric and magnetic fields and positron rays. CO2 Recognize photoelectric emission, photo electric equation. Reach a conclusion how photoelectric emission is extrapolated in the construction of photoelectric cells, photoemissive cells, photo voltaic cells and photo conducting cells. CO3 Reason Pauli's exclusion principle in L-S and J-J coupling. CO4 Make out the experimental arrangement for the normal Zeeman effect. Deduce anomalous Zeeman effect, Paschen-Back effect, Stark effect. CO5 Distinguish between characteristic X-ray spectrum and continuous X-ray spectrum. Realise the volume of uses of X-rays. Derive the necessary expression to understand the significance of Compton effect.
627	Elective 1-INTEGRATED ELECTRONICS	1937413	Employability/Entrepreneurship /Skill Development	CO1 Acquire knowledge of Operational Amplifiers and its applications. CO2 Applying Op-Amp to solve simultaneous equations and second order differential equations. Learn how the op-amp is used to construct oscillator to generate square wave and sine wave. CO3 Acquire the knowledge of principle, construction and working of D/A converter and A/D converter. CO4 Express the internal architecture of 555 Timer, and familiarize with the working of 555 as an Astable, Monostable multivibrator and Schmitt trigger. CO5 Understand and necessitate that the semiconductor memories like RAM, ROM, EPROM, EEPROM are applicable in today's digital world.
628	OPERATING SYSTEMS	1937414	Employability/Entrepreneurship /Skill Development	1. To understand the main components of an OS & their functions. 2. To study the process management and scheduling. 3. To understand various issues in Inter Process Communication (IPC) and the role of OS in IPC. 4. To understand the concepts and implementation Memory management policies and virtual memory. 5. To understand the working of an OS as a resource manager, file system manager, process manager, memory manager and I/O manager and methods used to implement the different parts of OS.
629	DATABASE MANAGEMENT SYSTEM	1937415	Employability/Entrepreneurship /Skill Development	1. To understand the different issues involved in the design and implementation of a database system. 2. To study the physical and logical database designs, database modeling, relational, hierarchical, and network models. 3. To understand and use data manipulation language to query, update, and manage a database. 4. To develop an understanding of essential DBMS concepts such as: database security, integrity, concurrency. 5. To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.



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630	NUCLEAR PHYSICS AND PARTICLE PHYSICS	1837518	Employability/Skill Development	CO1 Understand the Nuclear properties and different Nuclear Models. CO2 Evaluate problems in Half life and Mean life period and also to find the age of Earth. CO3 Understand the working of Radiation Detectors and Particle Accelerators. CO4 Compare between different Nuclear reactors and appreciate their applications. CO5 Distinguish the interaction, isospin and strangeness of different elementary particles. CO6 Solve problems under Nuclear Reactions.
631	SOLID STATE PHYSICS	1837520	Employability/Entrepreneurship /Skill Development	CO1 Understand the basic concepts of force between atoms and bonding thereby distinguish materials based on the type of bonding. CO2 Importance of dielectric constant. Realising that the factors dielectric constant & relative permittivity are key to the operation of capacitors and the determination of the levels of capacitance achievable. CO3 acquired knowledge on the nature of magnetic materials. CO4 clear understanding about x-ray diffraction, understand the defects in solids. CO5 Expected to gain knowledge of superconductivity, its underlying principles and its applications in modern world.
632	Elective II-MICROPROCESSOR FUNDAMENTALS	1837520	Employability/Entrepreneurship /Skill Development	CO1 Familiar with the general architecture of a microcomputer system and architecture & organization of microprocessor 8085. CO2 Recognize the instruction set of microprocessors 8085. CO3 Describe the memory interfacing to 8085 microprocessors. CO4 Explain the concept of interrupts in 8085 microprocessors. CO5 Acquire basic knowledge on Programmable peripheral interface 8255 and explain modes of operation of 8255.
633	PROGRAMMING IN JAVA	1837521	Employability/Entrepreneurship /Skill Development	1. Use an integrated development environment to write, compile, run, and test simple object-oriented java programs. 2. Read and make elementary modifications to Java programs that solve real-world problems. 3. Be able to create an application using string concept. 4. Be able to create a program using files in application. 5. Be able to create an Applet to create an application. 6. Identify and fix defects and common security issues in code.
634	ELECTRICITY AND ELECTROMAGNETISM	1837623	Employability/Entrepreneurship /Skill Development	CO1 In Electrostatics, study the properties and boundary conditions obeyed by Electric field, mathematical techniques to obtain electric field and their applications as Conductors, Capacitors, Dielectrics. CO2 Understand the foundations of magnetostatics, properties and boundary conditions obeyed by magnetic field, vector potential, magnetisation and applications. CO3 Acquire knowledge about AC and DC circuits and their applications. CO4 Understand Faraday's laws of electrolysis, self and mutual induction, measurement of horizontal and vertical component of Earth's magnetic field, Ballistic galvanometer and Induction. CO5 Understand the mathematical framework of Maxwell's equations, Electromagnetic waves, Scalar and Vector potential, Poynting's theorem, Hertz Experiment.



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635	RELATIVITY AND QUANTUM MECHANICS	1837624	Employability/Entrepreneurship /Skill Development	CO1 Findouttheinconsistencies inClassicalPhysics whiletryingto understandmicroscopic physics. CO2 Recall different laws related to Black Body Radiation – Einstein’s Theory of SpecificHeat– Limitations of Bohr’s Model. CO3 Computethewavelengthhofmatterwaves.CO4 Listoutdifferentexperimentalevidencesforwavenatureofparticles. CO5 Explain the postulates of Wave Mechanics and use Schrodinger’s equation to computeEigenvalues ofphysical observables. CO6 EvaluatetheCommutationrelationsofangularmomentumoperatorsandIdentifyPaulimatri ces. CO7 SolvethSchrodinger’s equationforstandardpotentialslikeHydrogenAtom.
636	MATHEMATICAL PHYSICS & NUMERICAL METHODS	1837625	Employability/Entrepreneurship /Skill Development	CO1 Evaluatethe understandingofbasicconcept oflinear vectorspace. CO2 Identifyarangeofmatrix methodsthat areessentialforsolvingadvancedproblem intheoreticalPhysics. CO3 Applyspecial functionskills tosolveproblemsinPhysics. CO4. Remember various processes involved in understanding the vector analysis to solvetheequations of motion. CO5 Understandand evaluatetheelementary complex analysis.
637	DIGITAL ELECTRONICS	1837626	Employability/Entrepreneurship /Skill Development	CO1 Identifyandrealisethatdifferentnumbersystem withdifferentnumberbasesplaya veryimportantpartinthe computer. CO2 Constructbasiclogicgateusing NANDandNORgates.To useBooleanAlgebrato designdigitalcircuitsand alsominimizationofgates byusingBooleanlaws. CO3 SimplifydigitalcircuitsusingKarnaughMapand create circuitsrequiring lessergates. CO4 Justifythatencoder,decoder,multiplexeraswellasdemultiplexerarecombinational logiccircuitsastheiroutputatanytimedependsuponthe combinationoftheinputsignalsprese n t at that instant only. CO5 ToreachaconclusionthatFlip-flopsisadatastorageelementandarefundamental buildingblocksofdigitalelectronicssystemusedincomputers,communications. Identifydi ff erenttypesof flip-flopsandwhat ledtothedevelopment oftheseflip-flops.CO6 Usingflip-flopstoconstructdifferenttypesofRegistersandCountersandconcludehow usefulequentialcircuitsare. CO7 ElucidatethefabricationstepsinvolvedinICproduction.
B.A. Tamil Literature -38				



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638	இக்கால இலக்கியம் - 1	2038101	Employability & Skill Development	<p>CO1 : தமிழ் மொழியில் உருவான சங்க இலக்கியம் முதல் இருபத்தோராம் நூற்றாண்டு வரையிலான கவிதை மரபை மாணவர்கள் அறிந்துகொள்ளுதல்.</p> <p>CO2 : புதுக்கவிதைகளைச் சமகால பொருண்மைகளை மையமாக்கக் கொண்டு கவிதைகளைப் படைத்தல்</p> <p>CO3 : முகநூல், கட்செவி முதலான ஊடகங்களில் கவிதைகளைப் படைத்து வெளியிடுதல்</p> <p>CO4 : தமிழ்நாடு அரசால் நடத்தப்பெறும் போட்டித் தேர்வுகளுக்கு மாணவர்கள் தயாராதல்</p> <p>CO5 : திரைப்படங்கள், குறும்படம், ஆவணப்படம் முதலான ஊடகங்கள் சார்ந்து பாடல்களை உருவாக்குதல்.</p> <p>CO6 : ஊடகங்களில் பணியாளராகச் சேர்ந்து பணியேற்றல்</p>
639	நன்னூல் - எழுத்ததிகாரம்	2038102	Employability & Skill Development	<p>CO1 : எழுத்துக்கள் கூட்டாகிச் சொற்களாக அமையும் மொழியின் அமைப்பை அறிந்திருத்தல்</p> <p>CO2 : மொழியைச் சரியாக உச்சரித்தல் மற்றும் நூல்களைக் கற்றதன் அறிவு கொண்டு சரளமாகப் பேசும் பேச்சாற்றல் வளம் பெறல்.</p> <p>CO3 : மொழியைச் சரியான தொடர் அமைப்புடன் இலக்கணப் பிழையில்லாமல் எழுதக் கற்று இருத்தல்.</p> <p>CO4 : நூலின் அழகு, குற்றம், உத்தி முதலானவற்றைக் கற்றதால் ஒரு நூல் எவ்வாறு இருக்கவேண்டும், அதன் உட்கூறு பொருண்மை சார்ந்து எவ்வாறு அமைந்திருக்க வேண்டும் என்பதை அறிந்து கொண்டு சிறந்த திறனாய்வாளராக உருப்பெறுதல்</p> <p>CO5 : சொற்கள் தம்முள்தாம் புணர்ந்து அதன் கட்டமைப்பை விடாமல் ஆயிரக்கணக்கான ஆண்டுகளாக இருந்து வரும் சிறப்பை உணர்ந்திருத்தல்.</p> <p>CO6 : சிறந்த மாணவனாகச் சிறந்த சமுதாயத்தைப் படைக்கும்</p>

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640	தமிழக வரலாறும் பண்பாடும் - 1	2038103	Employability & Skill Development	<p>CO1: தமிழக வரலாற்றை அறிந்துகொள்வது ஏன் அவசியம்? அதனை எவ்வாறு புரிந்துகொள்வது? சான்றுகள் மூலம் வரலாற்றை எவ்வாறு எழுதுவது? அண்மைக்காலத்தில் கிடைத்த சான்றுகள் மூலம் உலகளவில் தமிழக வரலாறு பெறும் முக்கியத்துவம் என்ன? போன்றவற்றை அறிதல்.</p> <p>CO2 : இயற்கை அமைப்புகளை அறிவதன் வழி இயற்கையை ஏன் பாதுகாக்க வேண்டும் என்ற தெளிவு ஏற்படுதல்.</p> <p>CO3 : வரலாற்றுக்கு முற்பட்ட காலம் முதல் சிந்து சமவெளிக் காலம் வரையிலான தமிழர்களின் வரலாற்றைப் புதைபொருள் ஆய்வுகள், மொழியாராய்ச்சி போன்ற சான்றுகள் மூலம் அறிதல்.</p> <p>CO4 : பண்டைத் தமிழர்கள் உலகளாவிய வணிகத்தில் முக்கியத்துவம் பெற்றிருந்ததனை அயல்நாட்டார் குறிப்புகள், அகழ்வாராய்ச்சிச் சான்றுகள், சங்கப் பாடல்கள் போன்ற சான்றுகள் மூலம் அறிதல்.</p> <p>CO5 : முச்சங்கங்கள், சங்ககால இலக்கியங்கள், ஆட்சிமுறை, போர்முறை, சமூகநிலை, பண்பாடு, கலைகள் ஆகியனவற்றைக் கற்றல்.</p> <p>CO6 : களப்பிரர், பல்லவர் கால இலக்கியங்கள், ஆட்சிமுறை, போர்முறை, சமூகநிலை, பண்பாடு, கலைகள் ஆகியனவற்றைக் கற்றல்.</p>
641	பயன்பாட்டுத் தமிழ் (NME - I)	2038104	Employability, Entrepreneurship & Skill Development	<p>CO1 : மாணவர்கள் தமிழ் மொழியின் இலக்கண அறிவைப் பெறுதல்</p> <p>CO2 : மாணவர்கள் பிழையின்றி தமிழில் வாசித்தல், எழுதுதல், பேசுதல்</p> <p>CO3 : இதழ்கள், பொது இடங்களில் தமிழ் மொழியில் உள்ள அறிவிப்புகளைக் கண்டு பிழைகளை அறிதல், களைதல்</p> <p>CO4 : அரசுப் பணித் தேர்வுகளில் தமிழ் மொழி சார்ந்த வினாக்களுக்கு விடையளிக்கும் அறிவைப் பெறுதல்</p> <p>CO5 : தமிழ் இலக்கியங்களின் அறிமுகங்களின் மூலமாக மாணவர்கள் ஒழுக்கத்தைப் பெறுதல்</p> <p>CO6 : மாணவர்கள் ஒருவரோடு ஒருவர் பழகும் ஆளுமைகளை தமிழ் இலக்கிய அறிமுகங்களின் மூலம் பெறுதல்</p>



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642	இக்கால இலக்கியம் – II	2038205	Employability & Skill Development	<p>CO1 : தமிழ் மொழியில் உருவான புதிய இலக்கிய வகைமைகளை மாணவர்கள் அறிந்துகொள்ளுதல்</p> <p>CO2 : சிறுகதை, புதினம் முதலான இலக்கியப் படைப்பு உத்திகளை அறிந்துகொள்ளுதல்</p> <p>CO3 : அரசுத் தேர்வுகளில் கேட்கப்படும் தமிழ் இலக்கியம் சார்ந்த வினாக்களுக்கான விடைகளை சேகரித்தல்</p> <p>CO4 : இளங்கலை முடித்த அடுத்த நிலை கல்விகான முதுகலை மற்றும் ஆய்வு நிலையிலான படிப்பைச் சார்ந்த நுழைத்துத் தேர்வில் வெற்றிபெற மாணவர்களுக்குப் பயன்படுதல்</p> <p>CO5 : பருவ இதழ்கள், வலையொலி முதலான ஊடகங்களில் சிறுகதைகளை படைத்து வெளியிடும் படைப்பாளியாக உருவாதல்</p> <p>CO6 : சிறுகதை, புதினம் முதலான இலக்கியங்களை வாசித்து ஆவணப்பட உருவாக்குநராதல்.</p>
643	நன்னூல் – சொல்லதிகாரம்	2038206	Employability & Skill Development	<p>CO1 : சொற்களை அதனதன் பொருளுக்கேற்ப பெயர்ச்சொல், வினைச்சொல் என்பனவாகப் பிரித்து மொழியைப் பிறர் தெளிவாகப் புரிந்து கொள்ளும் வகையில் கையாளக் கற்று இருத்தல்.</p> <p>CO2 : வேற்றுமை உருபுகள் சொல்லின் பொருளை மாறுபடுத்தும் பாங்கை நன்கு தெரிந்து அதற்கேற்ப உரிய உருபுகளைப் பயன்படுத்தி இலக்கணக் கட்டமைப்புடன் எழுதவும் சரளமாகப் பேசவும் அறிந்திருத்தல்.</p> <p>CO3 : வினைச்சொற்கள் பெயர்ச்சங்களாகவும் வினையெச்சங்களாகவும் வினைமுற்றுகளாகவும் அமைந்து தொடர் அமைப்பில் சரியாக இடம் பெறும் தன்மையைப் புரிந்து வைத்திருத்தல்.</p> <p>CO4 : ஒரு சொல்லானது பால், எண், இடம் ஆகியனவற்றிற்கேற்பப் பொருள் நிலையில் எவ்வாறு மாற்றம் அடைகிறது என்பதை உணர்ந்து மொழியின் அழகியலை உணர்ந்து இருத்தல்.</p> <p>CO5 : மொழியை வழுவில்லாமல் எழுதுவதும் பேசுவதும் குறித்துத் தெளிவாக அறிந்திருப்பதோடு எவையெல்லாம் மரபின் காரணமாக வழுவாக அமையாமல் உள்ளன என்பதையும் அறிந்து இருத்தல்.</p> <p>CO6 : மொழியின் கட்டமைப்புக்கு இடைச்சொற்களும் உரிச்சொற்களும் எவ்வாறு இன்றியமையாதனவாக</p>

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644	தமிழக வரலாறும் பண்பாடும் - 2	2038207	Employability & Skill Development	<p>CO1 : பிற்காலச் சோழர்களின் எழுச்சி, வளர்ச்சி, வீழ்ச்சியையும் அரசர்களையும் அதற்கான காரணங்களையும் கற்றல்.</p> <p>CO2 : பிற்காலச் சோழர்கலாத்தில் நிர்வாக முறை, சமயநிலை, நகரங்களின் அமைப்பு, பெண்கள் நிலை, பழக்கவழக்கங்கள், நம்பிக்கைகள், கலை, இலக்கியங்களின் வளர்ச்சி, மக்களின் வாழ்க்கைமுறை ஆகியன குறித்துக் கற்றல்.</p> <p>CO3 : பிற்காலப் பாண்டியர், சுல்தான்கள், நாயக்கர்கள், மராட்டியர்கள் கால ஆட்சிமுறை, மக்களின் வாழ்க்கைமுறை, கலை, இலக்கியநிலை, சமூகநிலை ஆகியனவற்றைக் கற்றல்.</p> <p>CO4 : ஐரோப்பியரின் வரவையும், அது தமிழக அரசியலிலும், சமூகநிலையிலும் ஏற்படுத்திய தாக்கம் குறித்து ஆராய்தல்.</p> <p>CO5 : இருபதாம் நூற்றாண்டில் தமிழக ஆட்சிமுறை, இலக்கியங்கள், கலைகள், கல்வி, பொருளாதாரம் போன்றவற்றில் ஏற்பட்ட மாற்றங்களையும் அதன் நன்மை, தீமைகளையும் பகுப்பாய்வு செய்தல்.</p> <p>CO6 : சிறப்புற்று விளங்கிய தமிழ்ப் பேரரசுகள் விழுந்ததற்கான காரணங்களைக் கண்டறிந்து வருங்காலத்தைத் தீர்மானித்தல்.</p>
645	இதழியல் : அறிமுகம்	2038208	Employability & Skill Development	<p>CO1 : தமிழர்களின் தொன்மையான கருத்துப் பரிமாற்ற முறைமைகளை மாணவர்கள் அறிந்துகொள்ளல்</p> <p>CO2 : மாணவர்கள் தங்களின் வலையொலி முதலான சமூக ஊடகங்களுக்குத் தாங்களே செய்திகளைத் திரட்டும் நிருபர்களாகச் செயல்படுதல்</p> <p>CO3 : தியாகிகள், விளையாட்டு வீரர்கள், தலைவர்கள் முதலானவர்களை நேர்காணல் செய்யும் ஆற்றல் பெறுதல்</p> <p>CO4 : கல்லூரிக்கு வருகைப் புரியும் சிறப்பு விருந்தினர்களோடு கலந்துரையாடுதல், அவர்களைப் பற்றிய அனுபவங்களை அவர்களிடமிருந்து சேகரித்தல். மேடையில் சிறப்பு விருந்தினர்களை அறிமுகப்படுத்தும் ஆற்றலை உருவாக்கிக் கொள்ளுதல்.</p> <p>CO5 : சமூக ஊடகங்களில் பிறரை நேர்காணல் செய்தல், செய்தி வாசித்தல் முதலான பணிகளை மேற்கொள்ளும் ஆற்றலை வளர்த்துக்கொள்ளுதல்</p> <p>CO6 : கேலிச் சித்திரங்களை வரைதல், வெளியிடுதல் முதலான திறன்களை மாணவர்கள் வளர்த்துக் கொள்ளுதல், பிழைத்திருத்தம் செய்யும் முறைமைகளை அறிந்துகொள்ளுதல்.</p>



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646	பக்தி இலக்கியமும் சிற்பிலக்கியமும்	2038209	Employability & Skill Development	CO1 : தமிழர்களின் வாழ்வியல் பக்தியோடும் சார்ந்த வாழ்வியல் என்பதை மாணவர்கள் அறிந்துகொள்ளுதல் CO2 : பக்தி இலக்கியங்களை கற்பதன் மூலமாக அரசுப் பணித் தேர்வுகளுக்கு தயாராதல் CO3 : குறவஞ்சி, பள்ள ஆகிய இலக்கியங்களைக் கற்பதன் மூலமாக தமிழர்களின் நிலப் பாகுபாடுகளையும் நிலப் பாகுபாடு சார்ந்த வாழ்வியலையும் மாணவர்கள் அறிந்துகொள்ளுதல் CO4 : தமிழ்விடு தூது என்னும் தூது இலக்கியத்தைக் கற்பதன் மூலமாகத் தமிழ் எழுத்துகளின் எழுத்துக்களின் பிறப்பு, வகைகள், பயன்பாடு முதலானவற்றை மாணவர்கள் அறிந்து கொள்ளுதல் CO5 : சைவம், வைணவம், கிறித்துவம், இஸ்லாமியம் முதலான சமயங்களின் கொள்கைகளை மாணவர்கள் அறிந்துகொள்ளுதல்
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647	நம்பியகப்பொருள்	1938310	Employability & Skill Development	<p>CO1 : அகப்பொருள் வகைகள், கூறும் முறைமை, ஐந்திணைக்குரிய முப்பொருள்கள், கைகோள் வகைகள், களவுப் புணர்ச்சியின் வகைகள், குறியிடங்கள், பிரிவின் வகைகள், அறத்தொடு நின்றல் போன்ற களவு, கற்புக்குப் பொதுவான இலக்கணக் கூறுகளை அறிந்துகொள்வதன் மூலம் அக இலக்கணம் குறித்த தெளிவைப் பெறுதல்.</p> <p>CO2 : களவுக்கு உரிய கிளவித் தொகைகளான இயற்கைப் புணர்ச்சி, வன்புறை, தெளிவு, பிரிவுழி மகிழ்ச்சி, பிரிவுழிக் கலங்கல், இடந்தலைப்பாடு, பாங்கற் கூட்டம், பாங்கிமதியுடம்பாடு, பாங்கியிற் கூட்டம், பாங்கமை பகற்குறி, பகற்குறி இடையீடு, இரவுக்குறி, இரவுக்குறி இடையீடு, வரைவு வேட்கை, வரைவு கடாதல், ஒருவழித் தணத்தல், வரைவிடை வைத்துப் பொருள்வயிற் பிரிதல் ஆகியனவற்றை இக்காலச் சூழலோடு ஒப்பிட்டு பண்டைத் தமிழரின் சிறப்பை உணர்ந்துக் கற்றல்.</p> <p>CO3 : தலைவன் தலைவி இருவரும் திருமணம் செய்துகொள்ளும் பல்வேறு முறைமைகள் குறித்து வரைவியல் விளக்குகிறது. வரைவின் இலக்கணம், வரைவு மலிதல், அறத்தொடு நின்றல், உடன்போக்கு, மீட்சி, வரைதலின் வகைகள் ஆகியவற்றைப் புரிந்துகொள்ளல்.</p> <p>CO4 : தலைவன் தலைவி இருவரும் ஒழுக்க நெறிகளுடன் இனிதே இல்லறம் நடத்துதலைக் கற்பியல் கூறுகிறது. கற்பின் இலக்கணம், கற்பிற்stem.</p> <p>ect and shine in all the fields plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule and control project activities</p> <p>listener, place, time, use, premise, fact, residue, object, field, etc., to be incorporated and used.து இயல்களுக்கும் பொதுவான செய்திகள் அனைத்தும் இவ்வியலில் கூறப்படுகிறது. குறிப்பாக அகப்பாட்டு உறுப்புக்களான கூற்று, கேட்போர், இடம், காலம், பயன், முன்னம், மெய்ப்பாடு, எச்சம்,</p>
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648	தமிழ் இலக்கிய வரலாறு - I	1938311	Employability & Skill Development	<p>CO1 : சங்க இலக்கிய நூல்கள், புலவர்கள், அகப்புற மரபுகள், உள்ளூறை, இறைச்சி போன்ற இலக்கிய உத்திகள், நிலைத்த உண்மைகள் ஆகியனவற்றை அறிந்திருப்பர்.</p> <p>CO2 : சங்ககால அகப்புற மரபுகள் எவ்வாறு அதற்கடுத்தடுத்த காலகட்டத்திலும் தன்னைப் புணரமைத்துக்கொண்டன என்பதனை ஆராய்தல்.</p> <p>CO3 : சங்க காலத்திலேயே தோற்றம் பெற்ற நீதி கூறும் இலக்கியவகை களப்பிரர் காலத்தில் எவ்வாறு பல்கிப் பெருகின?, மருந்துப் பெயர்களாலான நூல்கள், பழமொழிகள் மூலம் நீதி கூறும் நூல், ஆசாரத்தை வலியுறுத்திக் கூறும் நூல், பிற்கால நீதி இலக்கிய வளர்ச்சி என நீதி நூல்கள் குறித்து நுட்பமாகத் தெரிந்து வைத்திருப்பர்.</p> <p>CO4 : கதைகள் வழியாக இலக்கிய நயத்துடன் அறத்தை வலியுறுத்தும் காப்பிய இலக்கியத்தின் தோற்றம். வளர்ச்சி, பிற்காலக் காப்பியங்கள், காப்பிய வகைகள் ஆகியனவற்றை ஆராய்தல்.</p> <p>CO5 : பல்லவ, பாண்டியர் காலத்தில் பக்தி இயக்கமும் பக்தி இலக்கியமும் எவ்வாறு இயைந்து செயல்பட்டன?, நாயன்மார்கள், ஆழ்வார்கள், அவர்களது பாடல்தொகுப்புகளான பன்னிரு திருமுறை, நாலாயிரத் திவ்வியப் பிரபந்தம், பிற்காலப் பக்தி இலக்கியங்கள், அவற்றைப் பாடிய அடியார்கள் போன்ற விவரங்களை நுட்பமாகத் தெரிந்து வைத்திருத்தல்.</p> <p>CO6 : stem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control</p>
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649	காப்பியம்	1938412	Employability & Skill Development	<p>CO1 : தமிழ் மொழியில் உருவான் காப்பிய மரபின் தொன்மையை மாணவர்கள் அறிந்துகொள்ளுதல்.</p> <p>CO2 : சமணம், பௌத்தம், வைதீகம், கிறித்துவம், இஸ்லாமியம் ஆகிய சமயங்கள் சார்ந்த கொள்கைகளை நுட்பமான வேறுபாடுகளுடன் மாணவர்கள் அறிந்துகொள்ளுதல்</p> <p>CO3 : ஆசிரியர் பணிக்கான தேர்வுகளுக்குரிய நுழைத்தேர்வை எதிர்கொள்ள பயன்படுதல்</p> <p>CO4 : காப்பிய உருவாக்கக் கூறுகளை அறிந்துகொள்வதன் மூலமாக மத்திய, மாநில அரசுகள் சார்ந்து நடத்தப் பெறும் தேர்வுகளுக்கு மாணவர்கள் தயாராதல்</p> <p>CO5 : தொலைக்காட்சி முதலான ஊடகங்களுக்கான தொடர் கதைகளை உருவாக்கும் பயிற்சியை மாணவர்கள் பெறுதல்</p> <p>CO6 : கம்பன் கழகம், சேக்கிழார் இலக்கிய அமைப்பு, ஆன்மீக இலக்கிய அமைப்புகள் முதலான அமைப்புகள் நடத்தும் பேச்சு, கட்டுரை முதலான போட்டிகளில் பங்கேற்று விருதுகள், பரிசுகளைப் பெறுதல்</p>
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650	புறப்பொருள் வெண்பாமாலை	1938413	Employability & Skill Development	<p>CO1: ஆநிரைக் கவர்தல், ஆநிரை மீட்டல் ஆகிய வெட்சி, கரந்தை போர்முறைகளில் உள்ள பல துறைகளையும் அதற்கான எடுத்துக்காட்டுப் பாடல்களையும் கற்றல்.</p> <p>CO2 : மண்ணாசை காரணமாக மற்றொரு நாட்டின்மீது படையெடுத்தல், தன் நாட்டின்மீது போர் தொடுக்க வந்த படையளோடு போரிடுதல் ஆகிய வஞ்சி, கரந்தை ஆகிய திணைகளையும் அதன் துறைகளையும் சான்றுப் பாடல்களோடு புரிந்துகொள்ளுதல்.</p> <p>CO3 : மற்றொரு நாட்டின் கோட்டையைக் கைப்பற்றப் போர் தொடுத்தலும், பகைவர் தம் கோட்டையைக் கைப்பற்றுவதைத் தடுக்க எதிர்த் தாக்குதல் தொடுத்தலும் ஆகிய உழிஞை, நொச்சி ஆகிய திணைகளையும் அதன் துறைகளையும் தற்காலத்திலும் உள்ள கோட்டை அமைப்புகளை ஒப்பிட்டுப் பார்த்து புரிந்துகொள்ளுதல்.</p> <p>CO4 : இரு திறத்துப் படைகளும் ஓர் இடம் குறித்துப் போரிடுதலும், போரில் பெற்ற வெற்றியைக் கொண்டாடுதலும் ஆகிய தும்பை, வாகை ஆகிய திணைகளையும் அதன் துறைகளையும் சான்றுப் பாடல்களோடு புரிந்துகொள்ளுதல்.</p> <p>CO5 : ஆளும் தன்மையுடைய ஒருவரின் வீரம், புகழ், கொடை போன்ற பண்புகளைப் புகழும் பாடாண் திணையையும் துறையையும் எடுத்துக்காட்டுப் பாடல்களோடு கற்றல்.</p> <p>CO6 : சிற்றிலக்கியங்கள், தமிழ் இலக்கண வகைகள், தத்துவ நூல்கள், உரை வகைகள், இசை நாடக stem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs and download the machine code that will provide solutions real-world control</p>
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651	தமிழ் இலக்கிய வரலாறு - II	1938414	Employability & Skill Development	<p>CO1 : சிற்றிலக்கியக் காலம், வகைதொகை, சிற்றிலக்கியங்களில் சிறப்புப் பெற்ற வகைமைகள், புலவர்கள், பிற்கால வளர்ச்சி ஆகியவற்றை நுட்பமாகக் கற்றல்.</p> <p>CO2 : தமிழின் ஏழு இலக்கண வகைகளையும் சமய தத்துவ இலக்கியங்களையும் உரைவகைகளையும் மதிப்பிடல்.</p> <p>CO3 : பள்ளு, குறவஞ்சி, கீர்த்தனை, நொண்டி நாடகம், சங்கரதாஸ் சுவாமிகள் நாடகம் போன்ற இசை நாடகங்களையும் பல்வேறு சமயங்களும் தமிழ் வளர்ச்சிக்கு எவ்வாறு பங்காற்றின என்பது குறித்தும் தெளிவாக விளங்கிக் கொள்ளுதல்.</p> <p>CO4 : பத்தொன்பதாம் நூற்றாண்டுத் தமிழ்ப் புலவர்கள், உலகத் தமிழர்கள், பல்வேறு இயக்கங்கள் தமிழ் வளர்ச்சிக்கு பங்காற்றியிருப்பதைப் பகுப்பாய்வு செய்தல்.</p> <p>CO5 : நவீன இலக்கியங்களான மரபுக்கவிதை, புதுக்கவிதை, சிறுகதை, புதினம், கட்டுரை, உரைநடை, பிற துறைகள் சார்ந்து தமிழ் இலக்கிய மரபு எவ்வாறு வளர்ச்சி பெற்றது என்பதை மதிப்பிடல்.</p> <p>CO6 : சிற்றிலக்கியங்கள், தமிழ் இலக்கண வகைகள், தத்துவ நூல்கள், உரை வகைகள், இசை நாடக இலக்கியங்கள், தமிழ் வளர்ச்சிக்குப் பங்காற்றிய சமயங்கள், மறுமலர்ச்சி இலக்கியங்கள் ஆகியவற்றுக்கான தோற்றம், வளர்ச்சி, நீட்சி,</p>
652	சங்க இலக்கியம் - அகம்	1938415	Employability & Skill Development	<p>CO1 : சங்க அகப்பாடல்களின் மூலகமாக பழந்தமிழனின் களவு, கற்பு வாழ்க்கை முறைகளையும், சமூக நிலை போன்றவற்றை அவற்றின் பின்னணியோடு அறிந்து கொண்டு அதனைப் பகுப்பாய்வு செய்வது. அறிவாற்றலை வளர்க்கும்.</p> <p>CO2 : போட்டித் தேர்வுகளுக்குப் பயன்படுத்துவது.</p> <p>CO3 : சங்க காலத்தைப் பற்றிய தெளிவு, சங்க கால கட்டம் முதல் பழந்தமிழனின் வாழ்க்கையை முறை குறித்துக் காண்பது மாணவர்கள் புத்துணர்ச்சி பெற உதவும். ஆளுமைப் பண்பை உருவாக்கும்.</p> <p>CO4 : பழந்தமிழனின் கலை மற்றும் பண்பாட்டு ஆய்வுகளில் ஈடுபடத் தூண்டும்.</p> <p>CO5 : குடும்ப உறவுகளை அறிவதன் வழி குடும்பத்தைப் பாதுகாக்க வேண்டும் என்ற தெளிவும். இயற்கை அமைப்புகளை அறிவதன் வழி இயற்கையை ஏன் பாதுகாக்க வேண்டும் என்ற தெளிவு ஏற்படும். சமூக பொறுப்பை உண்டாக்கும்.</p> <p>CO6 : சங்க இலக்கியத்தில் அக வாழ்வு பற்றி அறிந்து கொண்டு வருங்காலத்தைத் தீர்மானித்தல். அகப்பாடல்களை அறிந்து கொள்வதன் வழி படைப்பாற்றல் உருவாகும்.</p>

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653	யாப்பருங்கலக்காரிகை	1838516	Employability & Skill Development	<p>CO1 : யாப்பிலக்கணத்தின் அடிப்படை உறுப்புகளான எழுத்து, அசை, சீர் ஆகியவற்றின் அடிப்படைகளைக் கற்றல்.</p> <p>CO2 : தளை, அடி, தொடை ஆகிய யாப்பிலக்கண உறுப்புகளைப் பற்றிய வரையறை, வகைகள் ஆகியனவற்றைப் புரிந்துகொள்ளல்.</p> <p>CO3 : வெண்பா, ஆசிரியப்பா ஆகிய இரு பாக்கள், அதன் பாவினங்கள் அமைப்புமுறைகளை கற்றுக்கொண்டு பாக்களை உருவாக்க முயல்தல்.</p> <p>CO4 : கலிப்பா, வஞ்சிப்பா, மருட்பா ஆகிய மூன்று பாக்கள், அதன் பாவினங்கள் அமைப்புமுறைகளை கற்றுக்கொண்டு பாக்களை உருவாக்க முயல்தல்.</p> <p>CO5 : மேற்கண்ட அனைத்து இயல்களுக்கும் பொதுவானதாகவும் ஆனால் அவற்றில் கூறப்படாததாகவும் உள்ள யாப்பிலக்கணக் கூறுகளைப் புரிந்துகொண்டு பயன்படுத்தல்.</p> <p>CO6 : இலக்கியங்களை உருவாக்கும்போதும் சுவைக்கும்போதும் உணர்ச்சியை அறிவதற்கும் உணர்வதற்கும் யாப்பிலக்கண</p>
654	தமிழ்மொழி வரலாறு	1838517	Employability & Skill Development	<p>CO1 : தமிழ்மொழியின் படிநிலைகள், ஒலி கூறுகள், மொழி குடும்பங்களுக்குள் உள்ள தொடர்புகள்/ வேறுபாடுகள், தனித்தியங்கும் ஆளுமை, மொழியில் ஏற்பட்டு வந்துள்ள மாற்றங்கள் போன்றவற்றை அதன் பின்னணியோடு அறிந்து ஆய்வுக் உட்படுத்துதல்.</p> <p>CO2 : போட்டித் தேர்வுகளுக்கு மொழியியல் (Linguistics) பாடத்தைத் தேர்வு செய்து பயன்படுத்துதல்.</p> <p>CO3 : தமிழ் - பிற திராவிட மொழிகள் (தெலுங்கு, மலையாளம், கன்னடம், துளு மற்றும் பிற) குறித்த அறிவை விரிவு செய்தல். தமிழ் - வடமொழி குடும்பங்களின் தனித்துவத்தை வெளிப்படுத்துதல், மாணவர்களுக்கு புதியதொரு மொழியைக் கற்க தூண்டுதல்.</p> <p>CO4 : அறிவியல் அடிப்படையிலான மொழியியல் ஆய்வுத்துறையில் ஈடுபட வழிவகுத்தல்.</p> <p>CO5 : மொழி ஒலிப்பு முறைகளை அறிவதின் ஊடாக இலக்கண இலக்கிய பயிற்சி பெறுதல், புதிய படைப்புகளை உருவாக்க தூண்டுதல், ஆளுமைப் பண்பை உருவாக்குவது.</p> <p>CO6 : பேச்சுமொழி எழுத்துமொழி போன்றவற்றைப் புரிந்துகொள்ள செய்வதனுடாக வருங்காலத்தில் மொழியியல் குறித்த புரிதலை உருவாக்கவும் வழக்கொழியும் நிலையிலுள்ள மொழிகளை மீட்டெடுக்க தூண்டுகவும் முதன்மையாக அமைகிறது.</p>



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655	தமிழ் இலக்கியத் திறன்	1838518	Employability & Skill Development	<p>CO1 : திறனாய்வைப் பற்றிய புரிதல், இலக்கிய ஆய்வுகள், இலக்கிய மதிப்பீடுகள். இலக்கிய உணர்ச்சிகள், மானிட உண்மைகள், இலக்கிய கலை, போன்றவற்றை அறிந்து கொண்டு அவற்றைப் பகுப்பாய்வு செய்வது.</p> <p>CO2 : திறனாய்வு குறித்த போட்டித் தேர்வுக்குப் பயன்படுத்துவது.</p> <p>CO3 : திறனாய்வு செய்வதைப்பற்றி இந்திய நாடு மற்றும் மேல் நாட்டு அறிஞர்கள் விளக்கங்களை அறிந்து கொண்டு தமிழின் தலைசிறந்த இலக்கியங்களைத் தெர்ந்தெடுப்பது அதன் பெருமையை அடையாளம் காண்பது மாணர்கள் புத்துணர்ச்சி பெற உதவும்.</p> <p>CO4 : தமிழ் இலக்கியங்களைத் திறனாய்வு செய்யத் தூண்டும். இதன் மூலம் ஆளுமைப் பண்பு வளரும்.</p> <p>CO5 : இலக்கியங்களைத் திறனாய்வு செய்யக் கற்றுக் கொள்வதன் வழி இலக்கியங்களை ஏன் படித்துப் பாதுகாக்க வேண்டும் என்ற பொறுப்பு ஏற்படும்.</p> <p>CO6 : காப்பியம், கவிதை, புதினம், சிறுகதை போன்ற இலக்கியங்களைப் படிக்கவும் அதனை எவ்வாறு படைப்பது என்பது குறித்த படைப்பாற்றலும் வளரும், வருங்காலத்தில் அதனைத் திறனாய்வு செய்ய முடியும்.</p>
656	இதழியலும் மொழிபெயர்ப்பும்	1838520	Employability & Skill Development	<p>CO1 : தமிழர்களின் தொன்மையான கருத்துப் பரிமாற்ற முறைமைகளை மாணவர்கள் அறிந்துகொள்ளல்.</p> <p>CO2 : மாணவர்கள் தங்களின் வலையொலி முதலான சமூக ஊடகங்களுக்குத் தாங்களே செய்திகளைத் திரட்டும் நிருபர்களாகச் செயல்படுதல்.</p> <p>CO3 : தியாகிகள், விளையாட்டு வீரர்கள், தலைவர்கள் முதலானவர்களை நேர்காணல் செய்யும் ஆற்றல் பெறுதல்.</p> <p>CO4 : கல்லூரிக்கு வருகைப் புரியும் சிறப்பு விருந்தினர்களோடு கலந்துரையாடுதல், அவர்களைப் பற்றிய அனுபவங்களை அவர்களிடமிருந்து சேகரித்தல். மேடையில் சிறப்பு விருந்தினர்களை அறிமுகப்படுத்தும் ஆற்றலை உருவாக்கிக் கொள்ளுதல்.</p> <p>CO5 : சமூக ஊடகங்களில் பிறரை நேர்காணல் செய்தல், செய்தி வாசித்தல் முதலான பணிகளை மேற்கொள்ளும் ஆற்றலை வளர்த்துக்கொள்ளுதல்.</p> <p>CO6 : கேலிச் சித்திரங்களை வரைதல், வெளியிடுதல் முதலான திறன்களை மாணவர்கள் வளர்த்துக் கொள்ளுதல், பிழைத்திருத்தம் செய்யும் முறைமைகளை அறிந்துகொள்ளுதல்.</p>



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657	சங்க இலக்கியம் - புறம்	1838520	Employability & Skill Development	<p>CO1 : சங்க அகப்பாடல்களின் மூலகமாக பழந்தமிழரின் வீரம், கொடை, நட்பு, புகழ், தத்துவங்கள் போன்ற புறவாழ்க்கைச் செய்திகளை அவற்றின் பின்னணியோடு அறிந்துகொண்டு அதனைப் பகுப்பாய்வு செய்வது. அறிவாற்றலை வளர்க்கும்.</p> <p>CO2 : போட்டித் தேர்வுகளுக்குப் பயன்படுத்துவது.</p> <p>CO3 : சங்க காலத்தைப் பற்றிய தெளிவு, சங்க கால கட்டம் முதல் பழந்தமிழனின் வாழ்க்கைமுறை குறித்துக் காண்பது மாணவர்கள் புத்துணர்ச்சி பெற உதவும்; ஆளுமைப் பண்பை உருவாக்கும்.</p> <p>CO4 : பழந்தமிழனின் கலை மற்றும் பண்பாட்டு ஆய்வுகளில் ஈடுபடத் தூண்டும்.</p> <p>CO5 : சங்ககால மக்களின் வீர உணர்வையும் அற உணர்வையும் அறிவதன்வழி இது குறித்த தெளிவு ஏற்படும். இது சமூக பொறுப்பை உண்டாக்கும்.</p> <p>CO6 : சங்க இலக்கியத்தில் புற வாழ்வு பற்றி அறிவதன்வழி வருங்காலத்தைத் தீர்மானித்தல். புறப்பாடல்களை அறிந்து கொள்வதன் வழி படைப்பாற்றல் உருவாக்கல்.</p>
658	தண்டியலங்காரம்	1838521	Employability & Skill Development	<p>CO1 : தொல்காப்பியர் உவமவியலில் கூறியுள்ள இலக்கணம் பிற்காலத்தில் அணியிலக்கணமாக வளர்ச்சி பெற்றதைக் கற்றல்.</p> <p>CO2 : போட்டித் தேர்வுகளுக்குப் பயன்படுத்துவது.</p> <p>CO3 : குளவணி, சொல்லணி, பொருளணி ஆகிய மூவகை அணிகளில் பொருளணியே மிகுதியாகப் பயன்பாட்டில் உள்ளதனை ஆராய்தல்.</p> <p>CO4 : பழந்தமிழனின் அழகியல் உணர்வைத் தண்டியலங்காரம் வழிப் புரிந்துகொள்ளுதல்.</p> <p>CO5 : அணிகளின் பல வகைகளைச் சான்றுகளுடன் கற்றல்.</p> <p>CO6 : கற்றுக்கொண்ட அணியிலக்கணத்திபடி மரபுக்கவிதை</p>

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659	திராவிட மொழிகளின் ஒப்பாய்வு	1838622	Employability & Skill Development	<p>CO1 : வரலாற்றுக்கு முற்பட்ட மொழிநிலை ஆய்வு குறித்தும் திராவிட மொழிக் குடும்ப ஒப்பாய்வின் வரலாறு குறித்தும் கற்றல்.</p> <p>CO2 : திராவிட மொழிகளின் முப்பிரிவுகள், அவற்றுக்கிடையேயான ஒற்றுமை, வேற்றுமைகளை ஒப்பீடு செய்தல்.</p> <p>CO3 : திராவிட மொழிகளுக்குரிய மெய்யொலிகளின் இயைபு, திரிபு, மெய்யொலி மாற்றங்கள் ஆகியன குறித்தும், இடம், திணை, பால், எண் உணர்த்தும் முறை குறித்தும் தெளிவு பெறல்.</p> <p>CO4 : திராவிட நாகரிகம் மிகப் பழமையானது என்பதை மொழியியல் ஆய்வு அடிப்படையில் விளக்குதல்.</p> <p>CO5 : மக்களின் நாகரிகம், பண்பாடு, வளமான வாழ்க்கை, வளமற்ற தன்மை போன்றவற்றை அவர்கள் பேசும் மொழிகள் கொண்டே முழுமையாக அறியமுடியும் என்பதை மொழியியல் கொண்டு கற்றல்.</p> <p>CO6 : மாணவர்களுக்கு மொழியியல் குறித்த ஆர்வத்தைத் தூண்டி, மொழியியல் ஆய்வாளர்களாக அவர்களை</p>
660	நாட்டுப்புறவியல்	1838623	Employability & Skill Development	<p>CO1 : நாட்டுப்புறவியல் என்னும் புதிய துறையின் அறிவை மாணவர்கள் பெறுதல்</p> <p>CO2 : நாட்டுப்புற மக்களிடையே தரவுகளைச் சேகரிக்கும் களப்பணி அறிவை மாணவர்கள் பெறுதல்</p> <p>CO3 : நாட்டுப்புற கலைகள் குறித்த அறிவைப் பெற்று, நாட்டுப்புறக் கலைஞர்களாக மாணவர்கள் உருவாதல்</p> <p>CO4 : மாணவர்கள் இன்றைய ஊடகங்களில் பணி வாய்ப்பைப் பெறும்பொழுது நாட்டுப்புறக் கதைகள், பாடல்களை நிகழ்த்தி தனிப்பட்ட ஆளுமையாளராக சிறப்பைப் பெறுதல்</p> <p>CO5 : நாட்டுப்புற விளையாட்டுகள் முதலான வழக்காறுகளைப் பயன்படுத்தி விளம்பர உத்திகளை ஊடகங்களில் பயன்படுத்துநராக மாணவர்கள் உருவாதல்</p> <p>CO6 : பயன்பாட்டு நாட்டுப்புறவியல் முறையில் புதியபுதிய பொருள்களை மக்களிடையே கொண்டுச் சேர்க்கும் சந்தைப்படுத்துதலுக்கான திறனை மாணவர்கள் பெறுதல்.</p>

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660	அடிப்படைக் கணினியியல்	1838624	Employability, Entrepreneurship & Skill Development	<p>CO1 : கணினியின் தோற்றம், வளர்ச்சி, ஐந்து தலைமுறைக் கணினிகள், கணினியின் வகைகள் குறித்து தெரிந்துகொள்ளுதல்.</p> <p>CO2 : கணினியின் பாகங்களான உள்ளீட்டகம், வெளியீட்டகம், மையச் செயலகம். ஆகியவற்றை நேரடியாகக் கண்டு புரிந்துகொள்ளுதல்.</p> <p>CO3 : கணினியில் பல்வேறு தொழில்நுட்பங்களைப் பயன்படுத்தி மைக்ரோசாஃப்ட், வேர்டு, எக்ஸெல், பவர்பாயண்ட் ஆகியவற்றை உருவாக்குதல் குறித்து செய்முறையாகச் செய்துபார்த்து கற்றல்.</p> <p>CO4 : இணையத்தில் தமிழ் செல்நெறி, தமிழ் இணைய மாநாடுகள் கணிப்பொறித் திருவிழாக்கள், தமிழ்க் கணினி மொழியியல் ஆகியனவற்றை மதிப்பிடல்.</p> <p>CO5 : மின்னஞ்சல், சுட்டுரை, முகநூல், தமிழ் எழுத்துரு பதிவிறக்கம், மின் மொழிபெயர்ப்புகள் போன்ற தமிழ் இணையப் பயன்பாட்டுச் செயலிகளையும் தமிழ் மின்னியல் நூலகம், தமிழ் விக்கிப்பீடியா போன்ற திறந்தவெளிக் கற்றல் வளங்களையும் கல்விக்காகப் பயன்படுத்துதல்.</p> <p>CO6 : கணினியின் முழுப் பயன்பாட்டைத் தெரிந்துகொள்வதோடு கல்விக்காகவும் அடுத்த கட்ட</p>
B.A. Tamil Literature -38				
	PAPER – 1 – CONTEMPORARY LITERATURE - I (POEM & PROSE)	2038101	Employability & Skill Development	<p>CO1 : Students' acquaintance with the Sangam literature formed in the Tamil language and the poetic tradition from the twenty-first century onwards</p> <p>CO2 : Creating poems with a focus on contemporary meanings of innovative poetry</p> <p>CO3 : Creating and publishing poems on Facebook, WhatsApp etc.</p> <p>CO4 : Preparation of students for competitive examinations conducted by the Government of Tamil Nadu</p> <p>CO5 : Creating songs based on media such as movies, short films, documentaries etc..</p> <p>CO6 : Joining the media as an employee</p>



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	GRAMMER – I - NANNOOL – EZHUTHTHADHIGARAM	2038102	Employability & Skill Development	CO1 : Knowing the structure of the language in which the letters form synonyms CO2 : Achieve fluent speech with the knowledge of pronouncing the language correctly and learning the texts. CO3 : Being able to write the language without grammatical errors with the correct sequence structure. CO4 : Learning the beauty, crime, strategy, etc. of a book and becoming a better reviewer by knowing how a book should be and how its content should be based on its relevance. CO5 : Realizing the specialness that has been around for thousands of years without letting the words fuck each other and its structure. CO6 : Shining as a socially conscious person who creates a better society as a better student.
	HISTORY AND CULTURE OF TAMIL NADU– I	2038103	Employability & Skill Development	CO1 : Why is it necessary to know the history of Tamil Nadu? How to understand it? How to write history with evidence? What is the significance of the history of Tamil Nadu in the world through the recent evidence? Knowing. CO2 : The way to know natural systems is to gain clarity on why nature should be protected. CO3 : Knowledge of the history of Tamils from prehistoric times to the Indus Valley period through archeological excavations and linguistic evidence CO4 : Knowledge of the history of Tamils from prehistoric times to the Indus Valley period through archeological excavations and linguistic evidence CO5 : Learning trinitities, Sanskrit literature, regime, warfare, social status, culture, arts. CO6 : Learning of Kalabhira and Pallava period literatures, rule, warfare, social status, culture and arts.
	APPLIED TAMIL (NME -1)	2038104	Employability, Entrepreneurship & Skill Development	CO1 : Students acquire grammar knowledge of Tamil language CO2 : Students can read, write and speak Tamil without error CO3 : Finding and debugging errors in magazines and public places in Tamil language CO4 : Gaining knowledge to answer Tamil language questions in Government Service Examinations CO5 : Getting students disciplined through introductions to Tamil literature CO6 : Acquiring students' personalities through Tamil literary introductions



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	CONTEMPORARY LITERATURE – II (SHORT STORIES, NOVELS, DRAMAS)	2038205	Employability & Skill Development	CO1 : Students' acquisition of new literary genres in Tamil language CO2 : Understanding literary creation techniques such as short stories and novels CO3 : Collection of answers to questions related to Tamil literature in government examinations CO4 : Utilization for students to pass the entrance examination for postgraduate and postgraduate education at the undergraduate and postgraduate level CO5 : Creating and publishing short stories in periodicals, web media, etc. Reading short stories, novels etc. CO6 : Documentary Creator
	GRAMMER – II- NANNOOL – CHOLLADHIGARAM	2038206	Employability & Skill Development	CO1: Learning to divide words into nouns and verbs according to their meaning and to handle the language in a way that others can clearly understand. CO2: Familiarity with the way in which differential elements differentiate the meaning of a word. CO3: Understanding the proper placement of verbs in nouns, verbs and verbs. CO4: Realizing the aesthetics of a language by realizing how a word changes its meaning according to gender, number, and place. CO5: Knowing clearly how to write and speak the language flawlessly and what is not flawed due to tradition. CO6: Understanding how interjections and adjectives are essential to the structure of a language.
	THAMIZHAGA VARALARUM PANPAADUM – II	2038207	Employability & Skill Development	CO1 : Learning about the rise, growth and fall of the later Cholas and the kings and the reasons for it. CO2 : Learning about the administrative system, religion, urban structure, status of women, customs, beliefs, art, development of literature, and lifestyle of the people in the later Chola period CO3 : Learning of the later Pandyas, Sultans, Nayaks, Marathas, the people, the way of life, art, literature and society. CO4 : An examination of the arrival of Europeans and its impact on Tamil Nadu politics and society. Analysis of the changes in the governance, literature, arts, education, economy, etc. of Tamil Nadu in the CO5 : twentieth century and its pros and cons. CO6 : Determining the causes of the fall of the distinguished Tamil empires and determining the future.



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	JOURNALISM - AN INTRODUCTION (NME - 2)	2038208	Employability & Skill Development	<p>CO1 : Students learn about the ancient communication systems of Tamils</p> <p>CO2 : Students act as reporters to gather news for themselves on their web-based social media</p> <p>CO3 : Gaining the energy to interview martyrs, athletes, leaders, etc.</p> <p>CO4 : Discussing with special guests visiting the college and gathering experiences about them. Developing the energy to introduce special guests to the stage.</p> <p>CO5 : Develop the ability to perform tasks such as interviewing and reading news on social media</p> <p>CO6 : Develop students' skills in drawing, publishing caricatures, etc., and learning debugging techniques.</p>
	DEVOTIONAL LITERATURE AND PRABANDHANGAL	2038209	Employability & Skill Development	<p>CO1 : Students' understanding that the biographies of professionals are devotional biographies</p> <p>CO2 : Preparing for civil service exams by studying devotional literature</p> <p>CO3 : Students learn about land discrimination and land discrimination based life of Tamils by learning Kuravanchi and Pallu literatures.</p> <p>CO4 : Students learn about the origin, types, usage, etc. of the letters of the Tamil alphabet by learning the missionary literature called Tamilvidu Thoodu</p> <p>CO5 : Students' understanding of the principles of religions such as vegetarianism, Vaishnavism, Christianity, Islam, etc</p> <p>CO6 : Students get the opportunity to work as an employee in devotional magazines</p>



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	GRAMMER – III – NAMBIYAGAPPORUL	1938310	Employability & Skill Development	<p>CO1 : Gain clarity about internal grammar by learning the grammatical elements common to chastity, such as intrinsic types, utterances, quintessential triads, handcuffs, types of plagiarism, symbols, types of division, chastity, etc.</p> <p>CO2 : Stolen adjectives such as natural orgasm, violence, clarity, segregation pleasure, segregation turmoil, spatialization, bangle meeting, bangle meeting, bangkie meeting, banter, pseudonym interpolation, overnight, oral rendering, draft quest, draft transcendence, one way or another Realizing and learning the significance of the ancient Tamils by comparing the division with the contemporary context.</p> <p>CO3 : The diagram illustrates the different ways in which the leader and the wife get married. Understand the grammar of the draft, the drafting, the charitable, the consensus, the recovery, the types of drawing.</p> <p>CO4 : Talaivaṅṅ talaivi iruvarum oḷukka neṛikaḷuṅṅaṅ iṅitē illaṅṅaṅ naṅattutalaik karpṅiyal kūrūkirātu. Karpṅiṅ ilakkaṅaṅ, karpṅirku uriya kiḷavittokai, ilvāḷkkai parattaiyir pstem.</p> <p>ect and shine in all the fields</p> <p>plain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule and control project activities</p> <p>listener, place, time, use, premise, fact, residue, object, field, etc., to be incorporated and used.</p>
	HISTORY OF TAMIL LITERATURE – I	1938311	Employability & Skill Development	<p>CO1 : Sangam is familiar with literary texts, poets, internal traditions, literary techniques such as latent, meat, and enduring facts.</p> <p>CO2 : Exploring how Sanskrit internal traditions reinvented themselves in the subsequent period.</p> <p>CO3 : How did the literary genres of justice, which originated in the Sangam period, proliferate during the Kalabhara period?</p> <p>CO4 : The origins of epic literature that emphasizes virtue with a literary flair through stories. Exploration of development, later epics, and coffee genres.</p> <p>CO5 : How did the devotional movement and devotional literature work together in the Pallava and Pandya periods?</p> <p>CO6 : Explain the origin, development, extension, change, etc. of internal and external literatures, justice literatures, epic literatures, devotional literatures.</p>



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	EPICS	1938412	Employability & Skill Development	<p>CO1 : Students to know the antiquity of the coffee tradition that originated in the Tamil language.</p> <p>CO2 : Students get to know the principles of Jainism, Buddhism, Vedicism, Christianity and Islam with subtle differences</p> <p>CO3 : Utilization to face entrance exams for teaching job</p> <p>CO4 : Preparing students for examinations conducted by the Central and State Governments by learning the components of coffee making</p> <p>CO5 : Receiving students training in creating series of stories for media such as television</p> <p>CO6 : Participate in competitions such as speeches, essays etc. organized by the Kamban Society, Cheikh Literary Society, Spiritual Literary Organizations etc. and receive awards and prizes.</p>
	GRAMMER – IV – PURAPPORUL VENPAMALAI	1938413	Employability & Skill Development	<p>CO1 : Āniraik kavartal, ānirai mīṭṭal ākiya veṭci, karantai pōmuraikaḷil uḷḷa pala tuṛaikaḷaiyum atarkāṇa eṭuttukkāṭṭup pāṭalkaḷaiyum kaṛṛal.</p> <p>CO2 : Maṇṇācai kāraṇamāka maṛṛoru nāṭṭiṇmītu paṭaiyeṭuttal, taṇ nāṭṭiṇmītu pōr toṭukka vanta paṭaikaḷōṭu pōriṭutal ākiya vañci, karantai ākiya ṭiṇaikaḷaiyum atāṇ tuṛaikaḷaiyum cāṇrup pāṭalkaḷōṭu purintukoḷḷutal.</p> <p>CO3 : Maṇṇāsai kāraṇamāka maṛṛoru nāṭṭiṇmītu paṭaiyeṭuttal, taṇ nāṭṭiṇmītu pōr toṭukka vanta paṭaikaḷōṭu pōriṭutal ākiya vañci, karantai ākiya ṭiṇaikaḷaiyum atāṇ tuṛaikaḷaiyum cāṇrup pāṭalkaḷōṭu purintukoḷḷutal.</p> <p>CO4 : Understanding the Departments of Thumpai and Vagai and its departments with testimonials on the battle of a place between two open forces and the celebration of victory in war.</p> <p>CO5 : Learning with exemplary songs in the field and field of study that praises the heroism, fame, and generosity of a ruler.</p> <p>CO6 : Explain the origins, development, extension, and transformation of CO6 short stories, Tamil grammars, philosophical texts, text types, musicastem.</p> <p>nterface the processor to external devices. Evaluate assembly language programs</p>



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HISTORY OF TAMIL LITERATURE – II	1938414	Employability & Skill Development	<p>CO1 : Cīrīlakkiyak kālam, vakaitokai, cīrīlakkiyañkaḷil ciṟappup perra vakaimaikaḷ, pulavarkaḷ, piṟkāla vaḷarcci ākiyavarrai nuṭpamākak kaṟṟal.</p> <p>CO2 : Evaluation of the Seven Grammatical Types of Tamil and Religious Philosophical Literatures and Texts.</p> <p>CO3 : To have a clear understanding of how musicals such as Pallu, Kuravanchi, Keerthanai, Nondi Natakam, Sankardas Swamy Natakam and various religions contributed to the development of Tamil.</p> <p>CO4 : Analysis of the contribution of nineteenth century Tamil poets, world Tamils and various movements to Tamil development.</p> <p>CO5 : Evaluating how the Tamil literary tradition has developed based on modern literature such as folk poetry, novels, short stories, novels, essays, prose and other fields.</p> <p>CO6 : Cīrīlakkiyañkaḷ, tamiḷ ilakkaṇa vakaikaḷ, tattuva nūḷkaḷ, urai vakaikaḷ, icai nāṭaka ilakkiyañkaḷ, tamiḷ vaḷarccikkup pañkāriya camayañkaḷ, maṟumalarcci ilakkiyañkaḷ ākiyavarukkāṇa tōṟṟam, vaḷarcci, niṭci, māṟṟam pōṉṟavarrait teḷivāka viḷakkutal</p>
– SANGAM LITERATURE - AGAM	1938415	Employability & Skill Development	<p>CO1 : Analyzing the theft, chastity lifestyle, social status, etc. of the Palanthamilan as the source of the Sangam incarnations with their background. Develops cognition.</p> <p>CO2 : Use for competitive exams.</p> <p>CO3 : Clarity about the Sangam period and the way of life of the Palanthamizhan from the Sangam period onwards will help the students to be refreshed. Creating personality traits.</p> <p>CO4 : Stimulate to engage in art and cultural studies of Palanthamil.</p> <p>CO5 : Clarity that the way to know family relationships is to protect the family. The way to know natural systems will lead to clarity on why nature should be protected. Causing social responsibility.</p> <p>CO6 : Determining the future by learning about inner life in Sanskrit literature. Creativity is the way to learn introspection.</p>
YAAPPARUNGALAK KAARIGAI	1838516	Employability & Skill Development	<p>CO1 : Yāppilakkaṇattin atippaṭai uruppukālāṇa eḷuttu, acai, cīr ākiyavarriṇ atippaṭaikaḷaik kaṟṟal.</p> <p>CO2 : Taḷai, aṭi, toṭai ākiya yāppilakkaṇa uruppukāḷaip parriya varaiaṟai, vakaikaḷ ākiyaavarraip purintukoḷḷal.</p> <p>CO3 : Veṇpā, āciriyaṇpā ākiya iru pākkaḷ, ataṇ pāviṇaikaḷ amaippumuṟaikaḷai kaṟṟukkoṇṭu pākkaḷai uruvākka muyaltal.</p> <p>CO4 : Kalippā, vañcippā, maruṭpā ākiya mūṇru pākkaḷ, ataṇ pāviṇaikaḷ amaippumuṟaikaḷai kaṟṟukkoṇṭu pākkaḷai uruvākka muyaltal.</p> <p>CO5 : Understanding and using grammatical elements that are common to all of the above but not mentioned in them.</p> <p>CO6 : Learning and applying the knowledge of grammar to know and feel emotion while creating and tasting literature</p>



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	HISTORY OF TAMIL LANGUAGE	1838517	Employability & Skill Development	<p>CO1 : To know and study the hierarchies of Tamil language, phonological elements, connections / differences within language families, individual personality, changes in language etc. with its background.</p> <p>CO2 : Selection and application of Linguistics subject for competitive examinations.</p> <p>CO3 : Tamil - Expanding knowledge on other Dravidian languages (Telugu, Malayalam, Kannada, Tulu and others). Expressing the uniqueness of Tamil-Northern families, encouraging students to learn a new language.</p> <p>CO4 : Leading to engage in science-based linguistic research.</p> <p>CO5 : Practicing grammatical literature through knowledge of phonetic patterns, motivating to create new works, developing personality traits.</p> <p>CO6 : The key is to develop an understanding of linguistics in the future and to stimulate the recovery of obsolete languages by making them understand spoken language and writing.</p>
	TAMIL LITERARY REVIEW	188518	Employability & Skill Development	<p>CO1 : Understanding and analyzing literary criticism, literary studies, literary evaluations, literary emotions, human facts, literary art, etc.</p> <p>CO2 : Application for competitive examination on performance review.</p> <p>CO3 : Knowing the interpretations of Indian and Western scholars about reviewing and choosing the best literature in Tamil will help the students to refresh and refresh themselves.</p> <p>CO4 : Encourages critique of Tamil literature. Through this the personality trait develops.</p> <p>CO5: The way to learn to critique literature is to take responsibility for why you read and preserve literature.</p> <p>CO6 : Read literature like epic, poetry, novel, short story and develop creativity on how to create it and be able to review it in the future.</p>
	TEMPLE ART OF TAMILS	1838520	Employability & Skill Development	<p>CO1 : Students learn about the ancient communication systems of Tamils.</p> <p>CO2 : Students act as reporters to gather news for themselves on their web-based social media.</p> <p>CO3 : Gaining the energy to interview martyrs, athletes, leaders, etc.</p> <p>CO4 : Discussing with special guests visiting the college and gathering experiences about them. Developing the energy to introduce special guests to the stage.</p> <p>CO5 : Develop the ability to perform tasks such as interviewing and reading news on social media.</p> <p>CO6 : Develop students' skills in drawing and publishing caricatures, and learning debugging techniques.</p>



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	SANGAM LITERATURE – PURAM	1838520	Employability & Skill Development	<p>CO1 : Knowing and analyzing the extraterrestrial messages such as heroism, gift, friendship, fame, philosophies of Palanthamil as the source of Sangam incarnations with their background. Develops cognition.</p> <p>CO2 : Use for competitive exams.</p> <p>CO3 : Clarity about the Sangam period, looking at the lifestyle of Palanthamizhan from the Sangam period onwards will help students to be refreshed; Creating personality traits.</p> <p>CO4 : Stimulate to engage in art and cultural studies of Palanthamil.</p> <p>CO5 : This can be clarified by knowing the heroic and charitable spirit of the Sangakkala people. This will create social responsibility.</p> <p>CO6 : Determining the future by knowing about external life in Sangam literature. Creating Creativity is the way to know departures.</p>
	THANDIYALANGARAM	1838521	Employability & Skill Development	<p>CO1 : Learning the grammar mentioned in Tolkappier's parable later developed into grammar.</p> <p>CO2 : Use for competitive exams</p> <p>CO3 : Exploring the most common use of material in the three categories of kulavani, sollani and porulani.</p> <p>CO4 : Understanding the aesthetic sense of Palanthamilan through Tandiyalankaram</p> <p>CO5 : Learning many types of teams with evidence.</p> <p>CO6 : Composing genetic poetry according to learned grammar.</p>
	DRAVIDIAN LANGUAGES AND ANALOGY	1838622	Employability & Skill Development	<p>CO1 : Learning about prehistoric linguistic study and the history of Dravidian language family comparison.</p> <p>CO2 : Comparing the three categories of Dravidian languages, the similarities and differences between them.</p> <p>CO3 : To get clarity about the conjugation, strain, consonant changes of the consonants of the Dravidian languages and the place, department, gender and numerical meaning.</p> <p>CO4 : Linguistic interpretation of the Dravidian civilization as very ancient.</p> <p>CO5 : Learning through linguistics so that people can fully understand their civilization, culture, prosperous life, infertility etc. with the languages they speak.</p> <p>CO6 : Stimulating students' interest in linguistics and encouraging them to become linguistic researchers.</p>



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	FOLKLORISTICS	1838623	Employability & Skill Development	<p>CO1 : Students gain knowledge of a new field called folklore</p> <p>CO2 : Students gain fieldwork knowledge to collect data among the folk population</p> <p>CO3 : Gaining knowledge of folk arts and developing students into folk artists</p> <p>CO4 : Performing folk tales and songs while students get a job in today's media and excelling as a personal personality</p> <p>CO5 : Developing students as users of advertising strategies in the media using proverbs such as folk games</p> <p>CO6 : Students gain the ability to market new products in a applied folklore way.</p>
	BASIC COMPUTING	1838624	Employability, Entrepreneurship & Skill Development	<p>CO1 : Learn about the origins and development of computers, five generations of computers, and computer types.</p> <p>CO2 : The components of a computer are the input, the output, and the central secretariat. To see and understand directly.</p> <p>CO3 : Experimental learning how to build Microsoft, Word, Excel, PowerPoint using various technologies on the computer.</p> <p>CO4 : Tamil Cellular, Tamil Internet Conferences on the Internet Evaluation of Computer Festivals and Tamil Computer Linguistics</p> <p>CO5 : Utilization of Tamil web application processors such as email, quote, facebook, tamil font download, e-translations and open space learning resources such as Tamil e-library, Tamil Wikipedia for education.</p> <p>CO6 : Know the full use of the computer and use the computer for education and further development</p>
B.A., ENGLISH LITERATURE - 39				
661	CLASSICAL LITERATURE	2039101	Employability, Skill Development	The students will be able to define classicism and identify the historical and cultural contexts of the classical age
662	CHILDREN'S LITERATURE	2039102	Employability	The students will be able to explain the history of children's Literature and the importance and need for a study of Children's literature.
663	SOCIAL HISTORY OF ENGLAND-I	2039103	Employability	The students will be able to explore the Early History of England and the Tudor England.
664	ADVERTISING AND PUBLIC RELATIONS	2030104	Employability, Entrepreneurship	The students will be able to enable students to appreciate the nature and scope of advertising.
665	ELIZABETHIAN AGE	2039205	Employability	The students will be able to identify the characteristic features of Elizabethan Age.



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666	THE AUGUSTUAN AGE	2039206	Employability	The students will be able to identify the background and characteristic features of Augustan Age.
667	SOCIAL HISTORY OF ENGLAND-II	2039207	Employability	The students will be able to analyse the status of England and its development in the 19th century
668	COMMUNICATION AND BROADCASTING AND TELECASTING	2039208	Employability, Entrepreneurship, Skill Development	The students will be able to analyse radio as a means of communication.
669	THE ROMANTIC AGE	1939309	Employability	The students will be able to recount historical and cultural contexts of the Romantic age, French and American Revolution.
670	THE VICTORIAN AGE	1939310	Employability	The students will be able to discuss the social and cultural changes that took place during the Victorian Age
671	HISTORY OF ENGLISH LITERATURE AND LITERARY FORMS - I	1939311	Employability	The students will able to evaluate the various poetic forms specific to the age and the writers of the period from Chaucer to Neo Classical Age
672	THE MODERN AGE	1939412	Employability	The students will be able to identify the features of the Modern period against the historical and political background.
673	ENGLISH LANGUAGE AND LINGUISTICS	1939413	Employability, Entrepreneurship	The students will be able to primarily recognize and relate the origin of language to human intellectual development
674	HISTORY OF ENGLISH LITERATURE AND LITERARY FORMS - II	1939414	Employability, Skill Development	The students will be able to distinguish the various types of plays and appraise the works of the 17th century dramatists
675	ENGLISH LANGUAGE AND TEACHING	1839515	Employability, Entrepreneurship, Skill Development	The students will be able to outline the development of ELT in India
676	SHAKESPEARE	1839516	Employability	The students will be able to analyse the works of Shakespeare, the Theatre and Audience during his life time



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677	AMERICAN LITERATURE	1839517	Employability	The students will be able to analyse and appreciate the history of American Literature
678	POST COLONIAL LITERATURE	1839518	Employability	The students will be able to identify the predominant themes of postcolonial literature
679	JOURNALISM AND MASS COMMUNICATION	1839520	Employability, Entrepreneurship, Skill Development	The students will be able to introduce the basic principles of Journalism and mass communication
680	CANADIAN LITERATURE	1839620	Employability	The students will be able to analyse the themes of multiculturalism that existed in Canada
681	WOMEN STUDIES	1839621	Employability	The students will be able to learn about feminism and the three waves of feminism
682	INDIAN WRITING IN ENGLISH	1839622	Employability	The students will be able to analyse the theme of Indianness and the contributions made by the great writers to the history of Indian Writing in English.
683	TRANSLATION STUDIES	1839623	Employability, Entrepreneurship, Skill Development	The students will be able to provide an over view of translation studies as an academic discipline
684	ENGLISH FOR CAREER	1839624	Employability, Entrepreneurship, Skill Development	The students will be able to gain an over view of the usage of English for Career
B.A., BUSINESS ECONOMICS - 41				
685	MACRO ECONOMICS - I	1841515	Employability, Skill Development	The student acquires the skills relating to investment function and employment determination.
686	FISCAL ECONOMICS - I	1841516	Employability	The student learns about individual tax, wealth tax and property tax which will be helpful for employment
687	INTERNATIONAL ECONOMICS - I	1841517	Entrepreneurship, Skill Development	The student acquired the skill of understanding the tariffs and balance of payment
688	HUMAN RESOURCE MANAGEMENT	1841518	Employability, Skill Development	The student learnt the concepts involved in recruitment and selection which will help them get employment.



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689	INCOME TAX	1841520	Employability, Skill Development	The student acquired the skill of assessing the previous year and assessment year.
690	MACRO ECONOMICS - II	1841620	Employability, Entrepreneurship	The student learnt the objective and importance of macro economic policy which will be helpful while he starts a new venture.
691	FISCAL ECONOMICS- II	1841621	Employability	The student learnt the objectives and instruments of fiscal policy which will be helpful for employment.
692	INTERNATIONAL ECONOMICS - II	1841622	Employability, Entrepreneurship	The student learnt about the different types of exchange rates which will be helpful when he starts a new venture
693	ENTREPRENEURIAL DEVELOPMENT	1841623	Entrepreneurship	The student learnt the basics of entrepreneurship which will make him start a new venture.
694	MANAGEMENT ACCOUNTING	1841624	Employability	The student will be able to prepare fund flow, cash flow statements and budgets which will fetch him employment.
	B.A., CRIMINOLOGY - 42			
695	PRINCIPLES OF CRIMINOLOGY	2042101	Skill development	Apply the crime prevention methods to prevent crimes in their locality
696	MAJOR LAWS IN CJS	2042102	Skill development	Know all the important sections, concepts, principles and doctrines from the major laws by the end of the syllabus
697	BASICS OF FORENSIC SCIENCE AND MEDICINE	2042103	Skill development	Comprehend the various methods of identifying a person using forensic evidence
698	NME1-FUNDAMENTALS OF CRIMINOLOGY	2042104	Skill development	Understand the different types of social problems in the light of criminology
699	VIGILANCE AND SECURITY MANAGEMENT	2042205	Skill development, Employability	Learning and understanding vigilance and security aspects in this paper increases student's employability chances.
700	FUNDAMENTALS OF PSYCHOLOGY	2042206	Skill development	Apply the theories of personality in real world
701	Juvenile Justice	2042207	Skill development	Analyse the characteristics of juvenile delinquents with respect to socioeconomic status, gender and family background and risk factors of recidivism.
702	NME2-FOUNDATIONS OF CRIMINAL JUSTICE SYSTEM	2042208	Skill development	Understand the significance of correctional institutions in reforming the criminals
703	HUMAN RIGHTS IN CRIMINAL JUSTICE ADMINISTRATION	1942309	Skill development	Understand the role of Human rights in Criminal Justice
704	SOCIAL PROBLEMS	1942310	Skill development	Understand the various violence committed against the vulnerable groups in the society
705	RESEARCH METHODS AND STATISTICS	1942311	Skill development	Demonstrate the difference between the various types of research and design and formulate hypothesis
706	PRISON ADMINISTRATION	1942412	Skill development	Recognize the various types of correctional methods and typology of prisons, prisoners
707	CYBERCRIME	1942413	Skill development	Knowledge about Tracking & Tracing Emails, Recovery of Digital Evidence, Setting up a Cyber Crime Investigation Cell
708	COUNSELLING AND GUIDANCE	1942415	Skill development, Employability	Apply the techniques of counseling in communication and interpersonal conversation in personal and professional setups.
709	POLICE ADMINISTRATION	1842501	Employability	Realize the significance of different records maintained at the police station



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710	POLICE STATION MANAGEMENT	1842517	Skill development	Remember the daily routine of the police station and understand the importance of modernization of police
711	VICTIMOLOGY	1842518	Employability	Understand the necessity of victim assistance in the Criminal Justice System
712	COMPUTER APPLICATION IN CRIMINAL JUSTICE	1842520	Skill development	Learning on computerisation of Police Station records and use of Computers for effective Management of Police Stations
713	COMMUNITY POLICING	1842621	Skill development	Recognize the various community policing methods adopted in the various parts of the state.
714	CONTEMPORARY FORMS OF CRIME	1842622	Skill development	Learn about organized crimes the problems and difficulties in identification, preventing Organized crimes
715	PRIVATE DETECTIVE AND INVESTIGATION	1842623	Skill development, Employability, Entrepreneurship	Design and conduct investigations independently
	B.A., SOCIOLOGY - 43			
716	PRINCIPLES OF SOCIOLOGY I	2043101	Skill development, Employability	Students able to get knowledge about the Sociology and process of socialization
717	INDIAN SOCIETY	2043102	Employability	Students came to know about variations of westernization, Sanskritization and Industrialization
718	SOCIAL PSYCHOLOGY	2043103	Skill development	Students trained to be a good leader and personality
719	NME - I INTRODUCTION TO SOCIOLOGY	2043104	Skill development, Employability	Students got basic knowledge about sociology.
720	PRINCIPLES OF SOCIOLOGY II	2043205	Skill development	Students able to explore about various important concepts of Sociology
721	SOCIAL PROBLEMS IN INDIA	2043206	Employability	Students realize about important social problems
722	SOCIAL ANTHROPOLOGY	2043207	Skill development	Students got more information about the life of tribes and community.
723	NME-II SOCIAL PROBLEMS	2043208	Employability	Students able to analyze various social problems
724	CLASSICAL SOCIAL THINKERS I	1943309	Skill development, Employability	Students able to understand about the pioneers of Sociologists and their contribution
725	SOCIAL MOVEMENTS IN INDIA	1943310	Employability	Students understand about the various social movements in India
726	SOCIAL DEMOGRAPHY	1943311	Skill development, Employability	Students got the skill of utilizing demographic profile and its importance
727	CLASSICAL SOCIAL THINKERS II	1943412	Skill development	Students acquired the sociological theoretical concepts.
728	RESEARCH METHODOLOGY AND STATISTICS	1943413	Skill development, Employability	Students trained about research methodology and statistics.
729	POLITICAL SOCIOLOGY	1943414	Skill development	Students able to know about the political system of India.
730	RURAL SOCIOLOGY	1843515	Skill development, Employability	Students able to get aware about the Rural Life and its Changes.
731	URBAN SOCIOLOGY	1843516	Skill development, Employability	Students understand about urban way of life.
732	INDUSTRIAL SOCIOLOGY	1843518	Skill development, Employability	Students got specialized about the industries and its function.
733	SOCIOLOGY OF DEVELOPMENT	1843518	Skill development, Employability	Students able to get knowledge about various development in society.



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734	MEDICAL SOCIOLOGY	1843620	Skill development, Employability	Students get aware about the importance of health and its related issues.
735	COMMUNICATION, MEDIA AND SOCIETY	1843620	Skill development, Employability	Students got the skill of communication and role of media.
B.A. TTM - 44				
736	GLOBAL TOURISM	1844516	Employability	To learn more about world wide tourist places and get employed as tourist guide
737	HUMAN RESOURCE MANAGEMENT	1844518	Employability	To learn the various management techniques for human resources development
738	ECO TOURISM AND SUSTAINABLE DEVELOPMENT	1844518	Employability	To promote tourism at minimum cost
739	AIRPORT MANAGEMENT	1844520	Skill development	To learn the process of air ticketing
740	BASICS OF COMPUTERS	1844520	Skill development	To know the techniques of using computer in tourism
741	MEDICAL AND WELLNESS TOURISM	1844622	Employability	To learn the various management techniques in hospitality sectors
742	TOURISM LAW AND ETHICS	1844623	Employability	To know the rights of tourists
743	EMERGING TRENDS IN TOURISM	1844624	Employability	To learn more about world wide tourist places and get employed as tourist guide
744	INFORMATION TECHNOLOGY IN TOURISM	1844625	Skill development	To know the techniques of using computer in tourism
745	AIR TICKETING AND FARE CONSTRUCTION	1844626	Skill development	To learn the process of air ticketing
B.COM ACCOUNTING & FINANCE - 45				
746	FINANCIAL ACCOUNTING	2045101	Employability, Entrepreneurship	<ol style="list-style-type: none"> 1. Recall the principles, concepts and conventions of accounting 2. Identify the reasons for the preparation of bank reconciliation statement and its application. Develop the knowledge about various accounting errors disclosed and not disclosed by the trial balance and the process of rectifying them 3. Prepare final accounts of a sole trader's concern and a non-profit organization 4. Build knowledge regarding meaning, causes and various methods of depreciation and its accounting procedure. 5. Understand the meaning, purpose and computation of average due date and the preparation of account current 6. Articulate the concept of fire insurance and apply them in the computation of claims under different circumstances 7. Create ledger, voucher entry, generate Profit and Loss and Balance Sheet computerized accounting software in addition to calculating GST, TDS and Security of data stem.



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747	ECONOMICS FOR FINANCE	2045102	Employability, Entrepreneurship	<ol style="list-style-type: none">1. Articulate the concept of National Income and Identify the challenges in National Income computation2. Examine the functional framework and various instruments of fiscal policy and application of fiscal policy tools. Understand the role of government in an economic system3. Define money and describe the different determinants of money demand and supply4. Define monetary policy and its objectives. Elucidate different components of monetary policy framework and explain the operating procedures and instruments of monetary policy5. Understand the concept of exchange rate, analyze the difference between nominal and real exchange rate and describe the impact of exchange rate fluctuation on domestic economy
748	BUSINESS MATHEMATICS- I	2008104	Employability, skill development	<ol style="list-style-type: none">1. Restate the definition of sets Differentiate the elements and sets Demonstrate relation and function of sets2. Distinguish between permutation and combination Solve the problem of binomial theorem Summarize the concepts of exponential and logarithmic series3. Define the term ratio Demonstrate the importance of proportions Solve the problems on ratios, proportion and variance4. Define the term interest Point out of the important terms of annuity and banker's discount5. Acquire adequate problem solving and analytical skills needed in an organization



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749	INTRODUCTION TO SUPPLY CHAIN MANAGEMENT	2045103	Entrepreneurship	<ol style="list-style-type: none"> 1. Outline the key concepts relating supply chain management and logistics management 2. Identify the main drivers of supply chain performance and explain their role in supply chain 3. Recommend the best mode of transportation under various situation and determine the various factors affecting transportation 4. Explain the role of warehouse and the various types of warehouses 5. Determine the importance of material handling and list out the various tools and equipment used for material handling 6. Summarize the role of information technology in SCM
750	ADVANCED FINANCIAL ACCOUNTING	2045204	Employability, skill development	<ol style="list-style-type: none"> 1. Articulate the need for preparing branch accounts and prepare books of accounts at both cost and invoice price 2. Explain the concept of hire purchase system and instalment system, default and repossession, and its accounting treatment in the books of both parties 3. Cite the concept of departmentalization and articulate its accounting process by allocating and apportioning various expenses on a suitable basis 4. Understand the concept of Investment Account and the accounting procedure for recording the investment transactions 5. Understand the concept of partnership in business and prepare accounting books for dissolution of partnership, and insolvency by the Application of Garner Vs Murray's rule and Piecemeal Distribution 6. Explain the concept of lease accounting and royalty and prepare the books of accounts for lessee and lessor
751	MANAGEMENT CONCEPTS & ORGANISATIONAL BEHAVIOUR	2045205	Employability, skill development	<ol style="list-style-type: none"> 1. Define the skills that are expected to be possessed by the manager 2. Restate the essentials of planning in management and sketching the organizational structure adopted in any organization 3. Analyze the role of recruitment, selection and training and articulate the managerial aspects of controlling and coordinating 4. Analyze the organizational and individual behaviour 5. Understand & evaluate the importance of leadership skills and motivational needs



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752	BUSINESS MATHEMATICS- II	2008211	skill development	<ol style="list-style-type: none"> 1. Restate the definition of plane analytical geometry • Demonstrate the Cartesian coordinate system • Demonstrate gradient of straight line 2. Distinguish between arithmetic mean and geometric mean • Solve problems on arithmetic mean and geometric mean 3. Understand the concept of integral calculus • Demonstrate the meaning and rules of integration • Solve problems on integration by parts rule 4. Define the term matrix • Point out the important terms of matrix inversion, solution to linear equation 5. • Acquire adequate organization problems solving and analytical skills needed in an organisation
753	E-COMMERCE	2045206	Employability, Entrepreneurship	<ol style="list-style-type: none"> 1. Develop an in-depth knowledge about the concept of E-Commerce and spell out the benefits and limitations of the same 2. Distinguish traditional Commerce and E- Commerce and determine the resources required for successful implementation of E-Commerce 3. Make use of various E-Commerce applications like E-Marketing, E-Shopping, E-Advertising, etc 4. Assume the role played by Electronic Data Inter-change in the modern world 5. Maximize the usage of electronic payment systems like payment using credit cards, debit cards, electronic purses etc. 6. Identify and make use of E-Marketing techniques
754	CORPORATE ACCOUNTING	1945307	Employability, Entrepreneurship	<ol style="list-style-type: none"> 1. Get an insight on the Accounting Standards and International Financial Reporting Standards (IFRS). Determine the Profit earned prior to incorporation 2. Understand the accounting procedures relating to issue and underwriting of shares and debentures 3. Determine the accounting procedures for redemption of preference shares and debentures 4. Develop knowledge about corporate accounting practices in conformity with the provisions of the Companies Act, 2013 and the latest amendments. Apply Revised Schedule VI formats in preparation of company final accounts 5. Understand the need for valuation of goodwill and shares and their valuation procedures



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755	LEGAL SYSTEM IN BUSINESS	1945308	Employability, Entrepreneurship	<ol style="list-style-type: none">1.Understand the basic requirements of the Indian contract Act, 18722.Illustrate how parties can discharge their contract by agreement3.Understand the general principles and the nature of obligations underlying Contracts of Indemnity & Guarantee and bailment & pledge4.Point out transactions involving Sale of Goods Act, 19305.Categorize and understand the various nuances of Intellectual Property Rights and Competition Law in India
756	BANKING THEORY LAW AND PRACTICE	1945309	Employability, Entrepreneurship	<ol style="list-style-type: none">1.Understand and explain the conceptual framework of banking2.Classify and demonstrate the types of deposits, cheques, loans and advances3.Illustrate the various electronic payment methods4.Explain primary and secondary functions of commercial banks, process of credit creation and Modern day banking methods – Internet banking, credit cards, debit cards, ECS, RTGS5.Apply the knowledge acquired in opening an account and carrying out banking transactions.(6.State the importance of customer relations and need for banking ombudsman
757	FINANCIAL MANAGEMENT	1945310	Employability, Entrepreneurship	<ol style="list-style-type: none">1. Demonstrate an understanding of the overall role and importance of the finance function and gain basic knowledge of financial management2.Demonstrate understanding of the goals of the finance manager and identify funding sources, instruments and markets3.Demonstrate knowledge about the value of money over time, its uses and application4.Identify the firm's business and financial risk and the study the impact of leverage on the expected return, expected EPS and the risk borne by the shareholders' through its application.(5.Understand the factors that influence capital structure decisions of a business organization and their impact on the market value of the firm



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758	BUSINESS STATISTICS & OR - I	1908322	Employability, Entrepreneurship	<p>1.Explain about Classification and tabulation of statistical data, Plot the Diagrammatic and graphical representation of data</p> <p>2.Explain about Central tendency and calculate various measures, Explain how Mean, median and mode are related in symmetric and skew symmetric distributions, Explain about Dispersion and calculate various measures, Estimate the coefficient of variation using standard deviation, Investigate the uniformity or consistency of a data using coefficient of variation, Interpret the concept of Skewness and methods to calculate its coefficient</p> <p>3.Define Correlation and its types, Calculate and interpret correlation between two variables, Apply Regression equations to estimate the values of unknown variables using the given data Rank the given data and examine the rank correlation</p> <p>4.Define the nature and features of operations research, Explain the term LPP, Formulate and model a linear programming problem, Solve an LPP using Graphical and Simplex method, Identify a feasible solution and optimum.</p> <p>Work hard, study hard, sweat and shine in all the fields</p> <p>Explain basic components of Network Analysis and critical path, Define PERT and CPM, Construct the network using CPM & PERT techniques to plan, schedule and control project activities</p>
759	ADVANCED CORPORATE ACCOUNTING	1945411	Employability	<p>1. Gain knowledge on meaning, process and accounting of internal reconstruction</p> <p>2.Distinguish holding and subsidiary company and gain knowledge on the accounting procedures to be followed in the preparation of the consolidated Balance Sheet of a holding company</p> <p>3.Gain knowledge on the accounting procedures of banking companies and its application</p> <p>4.Application the provision of the law in the preparation of the final accounts of insurance companies, life insurance as well as general insurance including fire insurance and marine insurance</p> <p>5.Determine the liquidator's remuneration payable in the event of liquidation</p> <p>6.Show how the assets are realized and liabilities are settled in the event of liquidation</p>



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760	ADVANCED FINANCIAL MANAGEMENT	1945412	Employability, Entrepreneurship	<p>1. Appraise the risk profile of firms, understand the influences of economic and political factors on the cost of various sources of funds, and estimate the specific costs of capital being debt, preference and equity capital and the overall cost of capital, using financial data.</p> <p>2. Understand the importance of capital budgeting and application of the various techniques for the evaluation of long term projects, their pros and cons and the basis of selection criteria of projects</p> <p>3. Understand the concept of working capital and its importance in a business, the factors that determine its quantum, the meaning and determination of operating cycle, and the computation of working capital</p> <p>4. Explain the key strategies and techniques used for managing cash, the determination of the best collection period for accounts receivables and techniques for effective management of inventory</p> <p>5. Understand the concept of dividend and justify the dividend strategies that support wealth maximization</p>
761	FINANCIAL SERVICES	1945413	Employability, Entrepreneurship	<p>1. Understand the concept of dividend and justify the dividend strategies that support wealth maximization</p> <p>2. Sketch the mechanism of Merchant banking and understand the capital market reforms</p> <p>3. Compare the functions of various credit rating agencies</p> <p>4. Recall the concepts relating to Leasing, Factoring, Venture Capital and Consumer Finance</p> <p>5. Build knowledge on SEBI regulations related with Mutual Funds and Merchant banking</p>
762	BUSINESS COMMUNICATION	1945414	Employability, Entrepreneurship	<p>1. Cite the importance of business communication</p> <p>2. Explains the methods of communication</p> <p>3. Explain the types of business letter under various contexts like interview, enquiry, sales letters.</p> <p>4. State different letter forms like bank correspondence, insurance correspondence which is of practical importance</p> <p>5. Apply the knowledge to write a report and prepare agenda, minutes of meeting, office order, circular etc</p> <p>6. Apply the acquired knowledge on latest trends in communication like e-mail, video conferencing – internet</p>



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763	BUSINESS STATISTICS & OR - II	1908427	Employability,	<p>1.Explain the term Time Series, Classify the various components of time series Analyse the Seasonal and Cyclical pattern in series of time</p> <p>2.Interpret the indices to identify trends in a data set, Construct simple and weighted price, quantity and value indices, Use the consumer price index to determine the purchasing power</p> <p>3.Explain basic probability axioms and rule, Calculate probabilities by using Addition and Multiplication law, with the the terms independent and mutually exclusive events, Apply Baye's Theorem to sole real world events (K2, K3)</p> <p>4.Explain the Transportation Problem and formulate it as LPP and solve the problem, Determine that an Assignment problem is a special case of LPP and evaluate using Hungarian method</p> <p>5.Define various terms and rules used Game Theory, Identify strategic situations and represent them as games, Compute general solution of $m \times n$ rectangular games</p> <p>•Demonstrate graphical solution for $m \times 2$ and $2 \times n$ games</p>
764	COST ACCOUNTING	1845515	Employability, Entrepreneurship	<p>1. Demonstrate the basic concept of cost and how costs are presented in financial statements</p> <p>2.Compute the cost of a product by preparing a cost sheet and quotation for a production industry.</p> <p>3.Prepare stores ledger to value closing stock and the cost of goods sold or sent for production</p> <p>4.Discover the need for fixing stock levels for production and its computation</p> <p>5.Understand the different wage payment systems and their computation, the concept of labour cost and labour turnover and their computation</p> <p>6.Develop the knowledge regarding overheads and concept of allocation and apportionment of overheads to various departments on suitable basis</p>
765	INCOME TAX LAW AND PRACTICE - I	1845516	Employability, Entrepreneurship, skill development	<p>1.Examine the basic concepts of schedules rate of tax liability, the basic concepts of income tax, total income and different heads</p> <p>2.Apply and practice the computation of salary income</p> <p>3.Produce annual value of house property and computation under different circumstances.</p> <p>4.Define the allowable and non allowable expenses and provisions relating to income from business profession are dealt with.</p> <p>5.Define income tax authorities and their role</p>



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766	PRACTICAL AUDITING	1845517	Employability, Entrepreneurship	<ol style="list-style-type: none"> 1.Understand the basic auditing principles, concepts, planning an audit and due diligence 2.Illustrate the steps required to perform internal control and internal check, vouching, verification and valuation of assets and liabilities 3.Understand the concept of depreciation & provisions 4.Pronounce the qualification for a company auditor and procedure for his appointment and removal. 5.Apply auditing in computerized environment and its utility in practical business.
767	ENTREPRENEURSHIP DEVELOPMENT AND NEW VENTURE PLANNING	1845518	Entrepreneurship	<ol style="list-style-type: none"> 1.Understand the basic concepts of entrepreneurship 2. Develop a B-Plan 3.Understand the various institutions providing support to entrepreneurial ventures 4.Analyze the favorable environment required to run the venture successfully and the role of the government 5.Criticize the challenges faced by women and rural entrepreneurs
768	PRINCIPLES OF INVESTMENT MANAGEMENT	1845520	Employability, Entrepreneurship	<ol style="list-style-type: none"> 1.Understand the differences between Investment and Speculation and list out the essentials of a good investment programme 2.Analyze the relationship between risk & return and determine the methods for minimizing risk 3.Identify the various investment alternatives available 4.Improve their knowledge relating capital markets and the regulatory authorities 5.Analyze the factors determining the suitability of an investment. 6. Understand the various derivative products like forwards, futures, options and swaps and explain the various mutual fund schemes
769	MARKETING MANAGEMENT	1845520 B	Employability, Entrepreneurship, skill development	<ol style="list-style-type: none"> 1.Understand the concepts and approaches in marketing and analyze the role of marketing in economic development 2.Identify the various factors influence consumer behaviour and locate Market Information system 3.Determine the elements of marketing mix and develop a new product plan 4.Apply different methods of pricing and create a channels of distribution 5.Recognize the E-marketing tools and evaluate the impact of social media marketing



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770	MANAGEMENT ACCOUNTING	1845620	Employability, Entrepreneurship	<ol style="list-style-type: none">1. Recall the importance of Management accounting and Imbibe critical thinking skills to analyze financial statements.2. Evaluate the financial position of the business by using ratio analysis.3. Apply the financial statement like Cash flow statement and Fund flow statement in decision making process.4. Provide the knowledge about budget, budgetary control and able to prepare various form of budget for the business.5. Analyze Cost-volume-Profit techniques to determine Optimal managerial decisions like make or buy decisions, shut down or continue.
771	INCOME TAX LAW AND PRACTICE II	1845622	Employability, Entrepreneurship, skill development	<ol style="list-style-type: none">1. Identify short term and long term capital gains and their related deductions2. Explain the concept of income from other sources like gift, Dividend etc and their computation3. List the procedures for set off and carry forward of losses4. Apply and practice the permissible deductions from gross total income as per 80 C to 80 U and computation of tax liability5. Define TDS and deductions of filing IT return6. State the assessment procedures.
772	GST	1845623	Employability, Entrepreneurship	<ol style="list-style-type: none">1. Understand the concept of Direct and Indirect Tax and custom laws2. Build knowledge on concepts of GST3. Classify the Goods and services exempted from tax and understand the procedures of registration and collection of tax4. Develop Knowledge about Input Tax credit5. Understand the taxability procedure on Goods and services
773	CORPORATE GOVERNANCE ETHICS	1845623 (B)	Employability	<ol style="list-style-type: none">1. Understand the concept of business ethics and its relevance in management and business2. Understand the concept of corporate Governance, the disclosure practices and its connection with globalization3. Develop knowledge about corporate governance reforms4. Introduce and understand the concept of corporate social responsibility and managing ethical dilemma5. Explain the contemporary practices in corporate governance



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774	CORPORATE FINANCE	1845624	Employability, Entrepreneurship	<p>1.Understand the various sources of corporate finance and its importance in the corporate world. Describe the underlying principles of corporate finance</p> <p>2.Determine the main constituents and the benefits of corporate governance and determine the ethical issues in finance</p> <p>3.Summarize and elaborate the importance of Corporate Social Responsibility in business and determine the provisions relating CSR under Companies Act.</p> <p>4.Explain the need and importance of corporate financial planning and determine the factors affecting financial plans</p> <p>5.Outline the various methods of corporate restructuring and financial restructuring and point out their benefits and drawbacks</p> <p>6.Explain the functioning of International Financial Market and gain knowledge about the various financial instruments traded in International Financial Market</p>
775	HUMAN RESOURCE MANAGEMENT	1845624 B	Employability, Entrepreneurship	<p>1.Understand the basic concept of human resource management and its evolution and challenges</p> <p>2.Articulate human resource planning using quantitative and qualitative dimensions</p> <p>3.List the methods of training and explain its role towards human resource development</p> <p>4.Explain performance appraisal methods and their link with compensation.</p> <p>5.Understand the concept of employee health, safety and e-HRM</p> <p>6.Explain the measures of welfare of the employees.</p>
	B.SC., INTERIOR DESIGN & DÉCOR - 46			
776	ERGONOMICS IN INTEIOR	1846516	Employability	The students will learn about green environment and can get employed in Corporates
777	APPLIED ART ON TEXTILES	1846517	Employability	The student will learn to apply art work on Textiles and get employment in designing textilegarments.
778	ART AND ARCHITECTURE- WESTERN	1846518	Entrepreneurship	The student can turn into entrepreneurs in the architecture line.
779	BASICS OF NUTRITION	1846520	Employability	The students will learn about all aspects of nutrition and get employed as a dietician.
780	ADVERTISING AND GRAPHIC DESIGN	1846520	Employability	The student will learn about the techniques of advertising and get employment in corporates
781	SURFACE FINISHES	1846621	Employability	The student will learn about the different kinds of polishing, painting and can get self employed



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782	ART AND ARCHITECTURE- INDIAN	1846622	Entrepreneurship	The student can turn into entrepreneurs in the architecture line.
783	PRINCIPLES OF RESOURCE MANAGEMENT	1846623	Employability	The student will learn to complete the work with minimum resources
784	LANDSCAPE AND FLORICULTURE DESIGN	1846624	Entrepreneurship	The student can start his own business in providing landscape consultancy
785	BASICS OF DECORATIVE STYLE AND INDIAN INTERIORS	1846625	Skill Development	The student will develop the skill of various styles of interior decoration
	B.SC., PSYCHOLOGY - 47			
786	GENERAL PSYCHOLOGY- I	2047101	Employability, Skill development	Understand the Scope and branches of psychology and various applications of Learning theories and Memory improving techniques
787	BIOLOGICAL BASIS OF BEHAVIOR - 1	2047102	Employability, Entrepreneurship	Able to design and conduct research with ethical knowledge. Understand Structure, Function and process of Nervous system
788	PRINCIPLES OF SOCIOLOGY	2047103	Employability	Able to analyse the dynamics of society and human interaction in a multicultural setting and to imply inclusivity in diversity.
789	NME:- STRESS AND COPING	2047104	Employability	Critically analyse and evaluate various leadership styles, teamwork process in work setting and to investigate the role of culture and climate in organisational development and change
790	GENERAL PSYCHOLOGY -2	2047205	Employability, Skill development	Understand and evaluate the major concepts of Psychology like Intelligence, Emotions, Motivation, Personality and its measures
791	BIOLOGICAL BASIS OF BEHAVIOR - 2	2047206	Employability, Entrepreneurship, Skill development	Able to develop intricate understanding about human sensory - neural system and various forms of disorders. Also gain knowledge on what brain damage mean, what it can lead to it and how it can be prevented?
792	FUNDAMENTALS OF SOCIAL ANTHROPOLOGY	2047207	Employability, Entrepreneurship	Able to deduce the role of Family, Kinship, Marriage and political setup in Human Development and Examine the nature of reward and punishment in the development of antisocial behaviour and assessing various methods to prevent it.
793	BUILDING PSYCHOLOGICAL	2047208	Employability	Able to gather valuable information on Life insurance products- term-whole life-endowment
794	DEVELOPMENTAL PSYCHOLOGY 1	1947309	Employability, Entrepreneurship, Skill development	Able to display the Knowledge on various stages of human development from fertilization until adolescence, and critically analyse the challenges faced at each developmental stage and appraise methods to deal with the challenges.
795	STATISTICS IN PSYCHOLOGY	1947310	Employability, Entrepreneurship	Able to examine various statistical tools, its methods and its usage in conducting research and in interpretation of research results.
796	DEVELOPMENTAL PSYCHOLOGY 2	1947412	Employability, Entrepreneurship	Able to display the Knowledge on various stages of human development from adolescence to old age and critically analyse the challenges faced at each developmental stage and appraise methods to deal with the challenges.
797	MARKETING AND CONSUMER BEHAVIOR	1947413	Employability, Entrepreneurship	Able to analyse the dynamics of market and marketing strategies to enhance consumer behaviour.
798	PSYCHOPATHOLOGY -1	1847515	Employability, Entrepreneurship	Understand the etiology and risk factors of abnormal behaviour. able to imply the knowledge of DSM categorisation of abnormality. analyse various type of anxiety, somatoform disorders. Able to critically evaluate various preventive and treatment procedures



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799	PSYCHOLOGICAL RESEARCH AND MEASUREMENT	1847516	Employability, Entrepreneurship, Skill development	Able to conduct and write a complete research report by gaining knowledge of various research designs, sampling techniques and methodologies
800	APPLIED PSYCHOLOGY	1847517	Employability, Entrepreneurship, Skill development	Sketch and determine the role of psychology and psychologists in various spectrums like cognitive psychology, community psychology, school psychology
801	SOCIAL PSYCHOLOGY I	1847518	Employability, Entrepreneurship	Understanding human behaviour in social setting. Analyse various social psychology concepts like social cognition, Attitude formation in explaining human behaviour.
802	PSYCHOPATHOLOGY II	1847620	Employability, Entrepreneurship	Critically analyse the etiology and Symptoms of various disorders like, mood disorders, Schizophrenia, personality disorders, drug addiction behaviour and sexual dysfunctions. Able to critically evaluate various preventive and treatment procedures
803	ORGANISATIONAL PSYCHOLOGY	1847621	Employability, Entrepreneurship	Critically analyse and evaluate various leadership styles, teamwork process in work setting and to investigate the role of culture and climate in organisational development and change
804	SOCIAL PSYCHOLOGY - 2	1847622	Employability, Entrepreneurship	Understanding human behaviour in social setting. Analyse various social psychology in explaining human behaviours like Prejudicism, stereotyping, aggression etc
M. A JOURNALISM - 48				
805	HUMAN COMMUNICATION	2048101	Employability	Enable effective communication, Enhance group output
806	REPORTING AND WRITING SKILLS	2048102	Employability, Skill Development	Enhance the reporting skills, Develop effective writing skills
807	EDITING SKILLS	2048103	Employability, Skill Development	Improve editing skills in print media, Design and create page layouts
808	INFORMATION AND COMMUNICATION TECHNOLOGY	2048104	Employability	Using ICTs for effective communication, Empowering students with Developmental communication skills
809	ELECTIVE - I : TRAVEL PHOTOGRAPHY	2048105(A)	Employability, Entrepreneurship, Skill Development	
810	ELECTIVE - I : PHOTOJOURNALISM	2048105 (B)	Employability, Entrepreneurship, Skill Development	
811	ELECTIVE - II : MEDIA SKILLS	2048106 (A)	Employability, Entrepreneurship, Skill Development	
812	ELECTIVE - II : ONLINE JOURNALISM AND WEB MANAGEMENT	2048106 (B)	Employability, Entrepreneurship, Skill Development	



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813	MASS COMMUNICATION THEORIES	2048207	Employability	Analyze News, Develop public communication strategies
814	MEDIA,CULTURE AND SOCIETY	2048208	Employability	Analyze media content, Create effective media text
815	COMMUNICATION RESEARCH METHODS	2048209	Employability	Device effective sampling techniques for research, Ability to collect data for research
816	DIGITAL MARKETING	2048210	Employability, Entrepreneurship, Skill Development	
817	ELECTIVE III: HUMAN INTEREST STORIES	2048211(A)	Employability, Skill Development	
818	ELECTIVE III: CULTURAL JOURNALISM	2048211 (B)	Employability, Skill Development	
819	ELECTIVE IV: MOBILE JOURNALISM/ NEWS PRODUCTION	2048212(A)	Employability, Entrepreneurship, Skill Development	
820	ELECTIVE IV: NEWS PRODUCTION	2048212(B)	Employability, Entrepreneurship, Skill Development	
821	ELECTIVE - IV : MEDIA MANAGEMENT	1948313	Employability	Enhance the Media Management skills, Develop Programming Strategies for project management
822	ELECTIVE - V : ADVERTISING	1948314	Employability	Create and manage Brands, Develop copywriting skills
823	RADIO NEWS PRODUCTION	1948317	Employability, Skill Development	Create radio news content, Develop presentation skills
824	ELECTIVE - VII : MEDIA LAWS AND ETHICS	1948418	Employability	Familiarise the students with the intellectual property rights and cyber laws,Create media content in accordance with the constitutional and media laws
825	FILM STUDIES	1948420	Employability	Identify the elements of film and appreciate the nuances of film making, Ability to critically analyze a film
826	SPECIALISATION	1948420	Employability	Develop news gathering skills, Produce news stories, Enrich journalistic skills
827	AUDIO VISUAL PRODUCTION	1948421	Employability, Entrepreneurship, Skill Development	Audio Visuals creation, Technical expertise in Production
	M.PHIL ECONOMICS - 51			
828	INTRODUCTION TO RESEARCH METHODS IN ECONOMICS	2051101	Skill Development	The student acquires skills to analyse cross section data
829	ECONOMIC THEORY	2051102	Employability	The student learns about the behavior under uncertainty which improves his employment potential.



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830	SELECTED ISSUES IN INDIAN ECONOMIC DEVELOPMENT	2051103	Employability	The student learns about the functioning of the Indian economy and the Indian Financial system which improves his employment opportunities.
	M.PHIL COMMERCE - 52			
831	RESEARCH METHODOLOGY	2052101	Employability	Identify appropriate research topic and to create an understanding on measurement and scaling techniques. Analyse the importance of Hypothesis and apply and test Hypothesis. Evaluating the various Methods of Data collection for business and social science research and conduct pilot study. Processing and Analysing Data using Appropriate Statistical Tools Apply principles of report writing and Draft Dissertation
832	ADVANCED FINANCIAL MANAGEMENT	2052102	Employability	Generate ideas on appropriate source and application of funds towards effective financial management, Evaluate the various investment options based on specified criteria Identify the various assumptions pertaining to different dividend policies selection of appropriate policy. Assess the factors affecting working capital and its calculation. Additional To deliberate on merger/ acquisition options, and the role of different finaservices. Construct a security portfolio considering relevant theories and their implications. Critically evaluate the impact of financial decisions on the strategic direof the organisation Analyse the company's performance and make proper recommendations.
833	ADVANCED MARKETING	2052103	Employability	Familiarize with the fundamentals of marketing of product, securities, services and market segmentation. Understand the nuances and complexities involved in product, pricing distribution and promotion policies. Analyze the distribution cost and risk management. Demonstrate the marketing ethics and legal provision of marketing. Introduce the concept of Supply Chain Management, Retail Marketing, Branding. Develop market analysis skills to capture market opportunities. Articulate in-depth understanding of a range of contemporary markeissues, theories & practices.
	M.PHILBIOCHEMISTRY - 55			



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835	RESEARCH METHODOLOGY	2055101	Employability, Skill Development	<p>"CO1 Understand the view of scientific research, objectives, and applications of research. Apply basic awareness of research hypothesis, designs, and data analysis. Analyse various research bodies and funding agencies, Ethics and patent filing.</p> <p>CO2 Experiment with basic knowledge of quantitative research techniques and will be able to independently perform experiments, and interpret experimental results.</p> <p>CO3 Perform Microscopy and Spectroscopy experiments professionally, and based on these results can draw a reasonable, accurate conclusion.</p> <p>CO4 Demonstrate and knowledgeable in proper use of modern laboratory techniques.</p> <p>CO5 Design effective experiments and critically analyze data. Interpret results of descriptive statistical methods effectively and make appropriate use of statistical software.</p> <p>CO6 Effectively communicate ideas and experimental results independently through diagrammatic and technical graphics.</p> <p>"</p>
836	ADVANCED BIOCHEMISTRY	2055102	Employability, Skill Development	<p>CO1 Graduates apply the rate limiting steps involved in metabolism of carbohydrates, lipids, nucleic acid and protein, in formulating and in identifying the error in gene level</p> <p>CO2 Graduates apply the concepts of molecular levels in research and in their higher studies.</p> <p>CO3 Graduates inculcate the skills in forming new ideas in various techniques and interpret the results by tools in genomics and proteomics. Graduates able to map the genes using the genetic markers in higher levels using genetic markers</p> <p>CO4 Graduates able to perform the plant tissue culture techniques and emerging new cells by protoplast fusion. Graduates are able to explain the physiological processes that occur during plant growth and development.</p> <p>CO5 Graduates will be able to perform animal biotechnology related experiments. Graduates familiarized in depth on desegregation of tissues; continuous or established cell culture, tissue culture, organ culture.</p> <p>CO6 Graduates able to apply in their research.</p> <p>interface the processor to extern</p>



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837	DNA TECHNIQUES & ITS CLINICAL APPLICATIONS	2055103	Employability, Skill Development	<p>CO1 Comprehend the applications of PCR in diagnosis of different infections</p> <p>CO2 Interpret the different vectors and their role in characterisation of a protein</p> <p>CO3 Differentiate eukaryotic vectors from prokaryotes and analyse intracellular expressions</p> <p>CO4 Verify protein integrity using various techniques and measure protein stability and processing of synthesised protein</p> <p>CO5 compare radioactive and non-radioactive probes</p>
838	ENZYMES & ENZYME TECHNOLOGY	2055103	Employability, Skill Development	<p>CO1 Comprehend enzymology</p> <p>CO2 Interpret various facets of enzymes in industry.</p> <p>CO3 Differentiate the advantages and disadvantages of immobilisation of enzymes</p> <p>CO4 Explain the application of enzymes as biosensors, biochips and biocomputers</p> <p>CO5 Elaborate on the molecular and clinical importance of enzymes</p>
839	PLANT BIOCHEMISTRY & PLANT THERAPEUTICS	2055103	Employability, Skill Development	<p>CO1 Define and correlate phytotherapeutics in different disorders</p> <p>CO2 Differentiate enzymic and non enzymic antioxidants</p> <p>CO3 Discuss the production of secondary metabolites and classify various phytochemicals</p> <p>CO4 Explain protoplast technology, somaclonal variation and plant tissue culture</p> <p>CO5 Illustrate the importance of nitrogen fixation and agrobacterium mediated gene transfer</p>
M.PHIL MICROBIOLOGY - 56				
840	RESEARCH METHODOLOGY AND ITS APPLICATIONS	2056101	Employability, Skill Development	<p>Understand the fundamental framework of research process, designs and methodologies.</p> <p>Identify appropriate topics for research, various sources of information for literature review and data collection for organized conduct of research.</p> <p>Appreciate the elements of scholarly writing and evaluate its quality and prepare a project proposal, formulate research synopsis and dissertation.</p> <p>Acquainted with the key terminology, concepts, tools and techniques used in statistical analysis to analyze and interpret outcomes.</p> <p>Adequate scientific understanding of the basic concepts in instrumentation used in research for both qualitative and quantitative analysis.</p> <p>Develop an understanding of the varied aspects of Bioprocess Technology.</p> <p>Briefing the techniques and tools associated with recombinant DNA technology.</p>



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841	ADVANCES IN MICROBIOLOGY	2056102	Employability, Entrepreneurship, Skill Development	<p>Explicate the significance of laboratory and hospital acquired infections and carry out the importance of control and preventive measures of Emerging MDR and XDR microbes.</p> <p>Explore the role of biological weapons and harmful microbes and discuss about the environmental aspects of emerging microbes.</p> <p>Demonstrate bioactive compounds from Extremophiles and Decode the significance of Biosensors, Biofuels and Biofilms.</p> <p>Point out quorum sensing in relation to barcoding of microbes, its application in clinical and industrial field.</p> <p>Explain the importance of Single cell protein and microbial enzymes and explore the significance of Biofertilizers in response to crop yield.</p> <p>Elucidate the quantitative and qualitative assays in antigen antibody reactions.</p> <p>Interpret various immuno assay methods. Illustrate HLA typing and ABO, Rh incompatibility testing and clarify Chemiluminescent detection of proteins.</p> <p>Expound the role of Nanoparticles and comment on the significance of Nanomaterial in medical and environmental field.</p>
842	INDUSTRIAL AND PHARMACEUTICAL MICROBIOLOGY	2056103	Employability	<p>Gain insight on industrially important microbes, recent developments in fermentation processes and various optimization strategies at fermenter level.</p> <p>Design, types of fermenters and various critical components of bioreactors, Comprehend the techniques and the underlying principles in downstream processing</p> <p>Get introduced to various strategies of product recovery from fermentation at industrial level.</p> <p>Elucidate various industrially relevant microbial products and their production process</p> <p>Manifest Good Manufacture Practice (GMP), Good Laboratory practice (GLP) providing guidelines and better control for In – Process and Final Product Control</p> <p>Acquire well-grounded knowledge and fully prepared for employment within the pharmaceutical and biomedical science industries</p>
843	BIOREMEDIATION	2056103	Employability	<p>Understand the nature and importance of bioremediation and apply the concepts of bioremediation to the real time problems.</p> <p>Acquainted with the process of bioremediation - mechanisms, types, monitoring strategies and success rate.</p> <p>Impart sufficient scientific understanding of the current environmental tribulations and global concern.</p> <p>Apply various techniques for bioassessment and biotreatability studies.</p> <p>Understand the impacts of contaminant characteristics to bioremediation process.</p> <p>Use microbes to abate or clean up contamination in real world applications.</p>



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B.A JOURNALISM - 61				
844	BASIC JOURNALISM	2061101	Employability, Skill Development, Entrepreneurship	The student will be able to utilize the knowledge gained to make decisions while in action .He can make use of ethical practices in profession. He can create new stories
845	HISTORY OF PRESS IN INDIA	2061102	Employability	The student will develop knowledge in different printing technologies, processes and recent trends in publishing industry
846	DESKTOP PUBLISHING	2061103	Entrepreneurship	The student will be able to create a DTP work using Adobe InDesign and Photoshop. He will be able to make use of suitable elements of design for attractive layout
847	HISTORY OF JOURNALISM IN ASIA	2061104	Employability	The student can evaluate press system in SAARC countries
848	PRINTING AND PUBLICATION DESIGN	2061205	Skill Development	The student will be able to access the recent technological development of printing processes. He will be able to recommend specific type of paper and printing technology for economical production of a newspaper
849	SOCIAL ISSUES IN INDIA	2061206	Employability	The students can create news reports on social issues
850	WEB PAGE DESIGN	2061207	Entrepreneurship	The students can create a web page design using Dream Weaver and Photoshop . He will be able to apply the Principles of Designing to create striking webpages
851	HISTORY OF SOUTH INDIAN ART	2061208	Employability	The student can appraise the importance of Brihadishwara temple
852	REPORTING AND WRITING	1961309	Employability, Skill Development	The student can compose news stories with acquired editing skills. He can employ ethical values in fact checking the content of the news story
853	POLITICAL ISSUES IN INDIA	1961310	Employability, Skill Development	The student will be able to analyse the democratic process and organization of political system in India. He can relate media and politics
854	INDIAN CONSTITUTION AND LEGAL SYSTEM	1961412	Employability, Skill Development	The student will be able to discuss judicial activism and its implications. He can analyse various constitutional amendments
855	ECONOMIC ISSUES IN INDIA	1961413	Employability, Skill Development	The student can evaluate economic reform policies and its success rate. He will be able to analyse liberlisation, globalisation and its consequences on Indian society
856	BROADCAST JOURNALISM	1961414	Employability, Skill Development	The student can make use of editing skills in constructing news for Television and Radio. He will be able to engage in team work to produce appropriate content for media
B.COM FINANCE & TAXATION - 62				
857	CORPORATE ACCOUNTING	1962309	Employability	The student can value intangible assets, goodwill, patents, trademarks and IPR. He can distinguish between IFRS and Indian Accounting standards and explain the proces of Transition to IFRS
858	AUDIT & ASSURANCE	1962310	Skill Development	The student can assess the internal control system, communication of Internal controls and application of Internal auditing concept. He can design and disclose audit reports and apply information system audit
859	CORPORATE & BUSINESS LAWS	1962311	Employability	The students can apply the provisions of Company's Act, 2013 and remember the concepts of various types of Companies



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860	COST ACCOUNTING	1962312	Employability	The students will be able to prepare attendance and payroll procedures, overview of statutory requirements and computation of labour efficiency, capacity and volume ratio
861	BUSINESS MATHEMATICS	1962313	Skill Development	The student will be able to demonstrate and solve certain real time business problems using ratios, proportion, variations, permutations and combinations.
862	FINANCIAL REPORTING	1962414	Employability	The student will learn to report the financial position of holding companies and preparation of consolidated balance sheet
863	INTERNATIONAL MARKETING	1962415	Entrepreneurship	The students will be able to examine International Market opportunities through market research, planning and strategy making.
864	MANAGEMENT ACCOUNTING	1962416	Employability	The students will be able to apply financial and non-financial performance integrators, cost-volume-profit relationship and estimate resource optimization.
865	INTERNATIONAL TAXATION & TECHNOLOGY	1962417	Skill Development	The students will be able to assess income/losses in case of partnership firms and change of ownership and termination.
866	OPERATIONS RESEARCH	1962418	Skill Development	The student will be able to restate the Assignment mathematical model. Explain the theory of assignment problem and use Hungarian method for solving assignment problem
867	BUSINESS ACCOUNTING	2062101	Employability, Skill Development	To enable the students to know the Principles of Accounting in General. and to Understand the System of Keeping Financial Accounting Records.
868	BUSINESS ECONOMICS	2062102	Employability, Entrepreneurship	To facilitate the understanding of the relevance and need of the Economics in the Current Scenario and To customize the importance of Business Economics and its relevance in market conditions.
869	INFORMATION TECHNOLOGY	2062103	Skill Development	To facilitate the understanding of the relevance and need of information Technology in the business and To apply the importance IT Applications in commerce domain
870	BASICS OF RETAIL MARKETING	2062104	Entrepreneurship	To identify and learn the nuances of Retail marketing concepts with specific reference to India
871	FINANCIAL ACCOUNTING	2062205	Employability	To enable the students to know the Principles of Accounting related to the commerce domain and To gain working knowledge on the special transactions relating to the business .
872	PRINCIPLES OF MANAGEMENT	2062206	Entrepreneurship, Employability	To understand the concepts of Management and its application in modern business, and to identify the various functions of management.
873	ETHICS AND CORPORATE GOVERNANCE	2062207	Employability	To understand the evolution and genesis of corporate governance globally and facilitate the understanding of ethics & corporate governance and its relevance to the business
874	BASICS OF BUSINESS INSURANCE	2062208	Entrepreneurship, Employability	To study the basics of Insurance, its inception in India and to know about the various insurance product and services.
	B.COM MARKETING MANAGEMENT - 63			
875	FINANCIAL ACCOUNTING-I	2063101	Employability	It enables the students to have a grip over the basic concepts of Accounting cycle and preparation of final Accounts.



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876	BUSINESS ECONOMICS	2063102	Employability	It helps the students to have intensive knowledge on Current Scenario in Economics and its relevance in market conditions
877	BUSINESS COMMUNICATION	2063103	Skill Development	It helps the students to have basic knowledge on the concept of Communication and Basic Techniques of the Modern forms of Communication.
878	BASICS OF RETAIL MARKETING	2063104	Employability	It helps the students to have basic outline on the topic of Retail Marketing and e-tailing and Supply chain management.
879	FINANCIAL ACCOUNTING-II	2063201	Employability	It helps the students to gain working knowledge on the special transactions relating to the marketing field
880	MARKETING MANAGEMENT	2063202	Entrepreneurship, Employability	It helps them to gain the knowledge on the students understand the Functions of Marketing and its strategies.
881	BUSINESS REGULATORY FRAMEWORK	2063203	Employability	It provides the basic knowledge to the students about legal framework related to the business and the relevance of legal aspects, Legal Remedies in business and marketing.
882	BASICS OF BUSINESS INSURANCE	2063208	Employability	It provides the students the theoretical knowledge about legal framework related to the Insurance business and the relevance of type of Insurance .
883	CORPORATE ACCOUNTING	1963309	Employability	The student will be able to apply the provision of Companies Act for issue of shares & debentures and Accounting for Employee stock option plan

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884	INTERNET AND DIGITAL MARKETING	1963310	Employability, Skill Development, Entrepreneurship	The student can explain the tools used for Search Engine Marketing such as Google Ad-words tools and Display marketing Techniques
885	CONSUMER BEHAVIOUR	1963311	Employability	The student will be able to discuss the Consumer buying habits, issue of privacy and ethics ,value post purchase process , satisfaction and retention of consumers
886	ENTREPRENEURIAL DEVELOPMENT	1963312	Entrepreneurship	The students can identify the methods of raising finance for an entrepreneurship venture
887	MODERN BANKING	1963313	Employability	The student will be able to analyse the various E-Banking services provided by the Banks and understand the difference between Internet Banking and Traditional banking
888	CUSTOMER RELATIONSHIP MANAGEMENT	1963414	Employability	The student will learn to discuss the Strategy applicable to Relationship Marketing to become better Marketing Executives and Analyst
889	INTERNATIONAL MARKETING	1963415	Entrepreneurship, Employability	The student will be able to discuss the intricacies of Global product management and pricing for International marketing. He will be able to apply the conceptual framework, Marketing Mix, Segmentation, Promotion and Advertising context to the International Marketing
890	FINANCIAL SERVICES	1963416	Employability	The student will be able to identify the working mechanism of mutual funds
891	RETAIL MANAGEMENT	1963417	Entrepreneurship, Employability	It provies the students to dentify the trends in the retail industry, Interpret consumer behaviour and its implications for retail managemenl
892	BUSINESS STATISTICS AND OPERATIONS RESEARCH	1963418	Employability	The student can employ optimal strategies and take decisions in competitive situations.
B.SC., STATISTICS - 64				
893	DESCRIPTIVE STATISTICS	2064101	Employability	The student will be able to analyze statistical data using measures of central tendency, dispersion and location.
894	MATHEMATICS FOR STATISTICS-I	2064102	Employability	The student has obtained the knowledge of inverse of a matrix using Cayley Hamilton theorem and definite integrals – Reduction formula
895	FUNDAMENTALS OF ACCOUNTING	2064103	Employability	The student has obtained the knowledge of organize, manage and present data
896	PROBABILITY AND RANDOM VARIABLES	2064204	Employability	The student will be able to calculate probabilities, and derive the marginal and conditional distributions of bivariate random variables
897	MATHEMATICS FOR STATISTICS-II	2064205	Employability	The student has obtained the knowledge of relationship between Gamma and Beta function and Laplacetransforms and inverse Laplace transforms

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898	BASICS OF PROBABILITY	2064207	Employability	The student has acquired the knowledge of real life data and translate real-world problems into probability models
899	DISTRIBUTION THEORY	1964308	Employability	The student will be able to solve the problem of CLT and convergence in probability and distributions
900	C' LANGUAGE PROGRAMMING	1964309	Skill Development	The student will be able to analyze the big data using c programming.
901	STATISTICAL INFERENCE-I	1964410	Employability	The student can solve the Consistency and Efficiency of an estimator
902	NUMERICAL METHODS	1964411	Skill Development	The student will be able to apply the concept of Numerical integration
	M. A. ENGLISH - 65			
903	SPOKEN ENGLISH	2065106	Employability & Skill Development	CO1: Construct their thoughts and speak with confidence (K6) CO2: Understand the context and converse with relevance (K2) CO3: Employ proper diction in oral communication (K3) CO4: Use proper pronunciation and intonation (K3)
904	ENGLISH FOR PROFESSIONAL COMMUNICATION	2065211	Employability & Skill Development	CO1: Understand theories related to communication (k2) CO2: Listen and accurately deliver information in specific work situations (k6) CO3: Speak proficiently in the workplace (k6) CO4: Write formal letters of application and complaint (k6) CO5: Interpret digital representations of data efficiently (k4)
905	ELECTIVE PAPER III- ENGLISH FOR CAREERS	2065212	Employability & Skill Development	CO1: Identify the necessary competence required in the field of Knowledge Management (K2) CO2: Develop mastery over presentation skills (K6) CO3: Edit newsletters and press releases (K6) CO4: Articulate better in public speaking (K3)

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