COURSE OUTCOMES (COs)

DEPARTMENT OF COMMERCE

SRI DURGA MALLESWARA SIDDHARATHA MAHILA KALASALA :: VIJAYAWADA-10

(An Autonomous college in the jurisdiction of Krishna University)

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**I**	**2020-2021**	COM T11B	Fundamentals of Accounting-I

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1- Identify transactions and events that need to be recorded in the books of accounts (PO4, PO5)

CO2-Equip with the knowledge of accounting process and preparation of Final accounts of sole trader (PO4, PO5)

CO3-Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP (PO2, PO4, PO5)

CO4-Analyze the difference between cash book and pass book in terms of balance and make reconciliation (PO2, PO4, PO5)

CO5-Critically examine the balance sheets of a sole trader for different accounting periods (PO1, PO4, PO5)

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**I**	**2020-2021**	COM T12A	**BUSINESS ORGANIZATION AND MANAGEMENT**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1-Recall the basic knowledge on conceptual areas such as commerce trade and industry of different types of business organizations. (PO4, PO5)

CO2-Have a demonstrated understanding on nature purpose and importance of different types of organizations.(PO4, PO5)

CO3-Articulate the fundamentals of joint-stock company as per companies Act 2013. (PO2, PO4, PO5)

CO4-Appraise the documentation and incorporation stages of a company. (PO2, PO4, PO5)

CO5-Discuss and implement the managerial traits and talents essential for managing business. (PO1, PO4, PO5)

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**I**	**2020 - 2021**	COM T14	**BUSINESS ENVIRONMENT**

COURSE OUTCOMES:

- This course aims at acquainting the students with emerging issues in business at the National and International level in the light of policies of liberalization and Globalization.
- evaluate the economic, social political and legal environment components in business decision making.

CO1: Understand how an entity systematically explores the external environment in which business operates.

CO2: To enlighten/familiarize the impact of economic environment and its effect on government policies for development of business.

CO3: To acquire specialized knowledge relating to economic policies in India.

CO4: critically examine the economic, social political and legal environment components in business decision making.

CO5:synthesize multiple perspectives to formulate responses to opportunities and institutions in international environment.

Program	Semester	Year	Course Code	Course Name
B.Com (Banking & Insurance)	**I**	**2020 - 2021**	COMT15	Principles and Practice of Insurance

1. To understand the principles and significance of insurance.
2. To familiarize the students about various services offered under life and non-life insurance products.
3. To impart thorough knowledge about various insurance acts and regulatory framework.

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: To create awareness about the concepts and introduction to insurance. (PO1, PO6)

CO2: To enlighten the students about various life Insurance products and documentation process. (PO6)

CO3: To create thorough knowledge about insurance claim settlement procedure and underwriting process.(PO1, PO6)

CO4: To create awareness about various non-life insurance products and services.(PO1, PO6)

CO5: To articulate about the regulating framework for Insurance sector in India. (PO1, PO6)

Program	Semester	Year	Course Code	Course Name
B.Com(Banking & Insurance)	**I**	**2020 - 2021**	COM T16	Elements of Financial Systems

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: To acquaint students with the structure and components of the Indian financial systems. (Po1) PSO2

CO2: Impart thorough knowledge about various financial markets in the existing regulatory framework. (Po1, Po4, Po5) PSO2

CO3:To enlighten the students about functions of various specialised financial institutions.

CO4:To impart thorough knowledge about various new financial instruments and their implications in the existing regulatory framework.

CO5: To create awareness about the concepts and basics of various financial services which are in a nascent and developing stage. (PO1)PSO2

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**II**	**2020 - 2021**	COM T21A	**FINANCIAL ACCOUNTING**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Determine the useful life and value of the depreciable assets.
and maintenance of Reserves in business entities.

CO2 Demonstrate the applicability of the concept of Provisions and reserves to understand the managerial Decisions and financial statements

CO3 Appreciate the need for negotiable instruments and procedure of accounting for bills honored and dishonored

CO4 Understand the concept of Consignment and learn the accounting treatment of the various aspects of consignment

CO5 Distinguish Joint Venture and Partnership and to learn the methods of maintaining records under Joint Venture

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (E.M)	**II**	**2020 - 2021**	ECO T22B	**BUSINESS ECONOMICS**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Understand the basic definitions and concepts of Managerial Economics (PO1)

CO2 Demonstrate the law of Demand and its price elasticity and law of supply (PO1, PO2)

CO3 Acquire knowledge on concepts of costs, nature of production, revenue and its relationship to business operations (PO1, PO2)

CO4 Integrates the concepts of Price and output decisions of firms under various market structures (PO1, PO3, and PO4)

CO5 Able to identify the components and process of calculating national income and phases of trade cycles. (PO1, PO3, PO4, PO6)

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**II**	**2020 - 2021**	COM T21A	FINANCIAL ACCOUNTING

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Student will be able to understand different situations to calculate interest on various instalments and understand need for re-possession and the procedure in case of default.-PO5

CO2: Student will be able to understand Profit & Non-profit concern and to ascertain the surplus/deficit relating to various non-trading concerns–PO5, PO6

CO3: Student will get the knowledge of partnership business, its accounts and modes of settlement in case of partnership restructuring.- PO6,PO7

CO4: Student will acquire the capacity to settle the accounts in case of dissolution by realization of various assets.-PO5, PO6

CO5: Student will obtain the knowledge of branch accounting procedure and the process of conversion of foreign branch transactions into Indian currency.-PO7

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**II**	**2020 - 2021**	COM T24	BANKING THEORY LAW & PRACTICE

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Articulate the operations, structure and importance of various financial institutions. (PO1, PO6)

CO2: Analyse the organisation structure and working of RBI. (PO1, PO6)

CO3: Employ the services of e-banking services. (PO1, PO6)

CO4: Articulate the regulatory framework of banks.(PO1, PO6)

CO5: Appraise the relationship of a banker with his customers. (PO1, PO6)

Program	**Semester**	**Course Code**	**Course Name**
B.Com (E.M)	**III**	COM T32	Business Statistics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn the application of statistical tools and techniques of decision making in Business.

CO 2: know measures of Central tendency and variability in Statistical data and its interpretation measures.

CO 3: identify basic Statistical Analysis used in sociological inquiry and measures of dispersion and skewness.

CO 4: learn measures of relation such as correlation and regression.

CO 5: obtain knowledge of valuation of goodwill and shares and its m

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**III**	**2020 - 2021**	COM CT31A	ADVANCED ACCOUNTING

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Student will be able to understand different situations to calculate interest on various installments and understand need for re-possession and the procedure in
case of default.-PO5

CO2- Student will be able to understand Profit & Non-profit concern and to ascertain the surplus/deficit relating to various non-trading concerns –PO6

CO3-Student will get the knowledge of partnership business, its accounts and modes of settlement in case of partnership restructuring.- PO7

CO4- Student will acquire the capacity to settle the accounts in case of dissolution by realization of various assets.-PO5

CO5- Student will obtain the knowledge of branch accounting procedure and the process of conversion of foreign branch transactions into Indian currency.-PO7

Program	Semester	Year	Course Code	Course Name
B.B.A	**III**	**2020 - 2021**	MGTT32	HUMAN RESOURCE MANAGEMENT

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Describe the functionality of Human Resource Department in an Organization in terms of primary functions. (L1 &amp ;L2)

CO2 Understand various processes such as the recruitment, selection function, performance appraisal and training & development. (L1 & L2)

CO3 Interpret the concepts of HR planning, job evaluation, compensation management and salary administration. (L1 & L2)

CO4 Apply the principles of various methods of performance appraisal in order to identify right methods that distinguish in between low performers and high performers. (L3)

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.B.A	**III**	**2020 - 2021**	MGTT33	ORGANISATIONAL BEHAVIOUR

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Identify and interpret the functions and scope of Organizational Behaviour in business organisations. ((L1, L2)

CO2 Relate and interpret the interdependence of various dimensions of Organizational Behaviour in impacting the behaviour of employees in

organizations. (L2)

CO3 Appreciate impact of Group Dynamics on the efficiency and effectiveness of an organization. (L3)

CO4 Distinguish among different management scenarios in order to make an appropriate choice of OB model that can yield better results. (L3)

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.B.A	**III**	**2020 - 2021**	MGTT37	BUSINESS LAW

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 This encompasses all the essential laws that to form and run a business which govern, manage, establish the rules that all

business should follow and take in to lawful consideration. (PO1, PO3, PO5) – PSO2

CO2 This states to know the federal laws, administrative regulations in business and how to control and cast out fraud in a lawful
manner. (PO1, PO4, PO5) – PSO2
CO3 To provide knowledge about the partnership act, 1932 and its legalities. (PO3, PO4, PO5)-PSO2
CO4 To understand the law of sale of good act and its rules and agreements. (PO1, PO5, PO7) -PSO2
CO5 To understand the overview of right to information act, 2015, consumer protection act, 1986Competition commission act

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.(Banking & Insurance)	**III**	**2020 - 2021**	COM T32	BUSINESS STATISTICS

COURSE OUTCOMES:

At the end of the course the student will be able to

CO-1 Students will be able to understand the basic knowledge and characteristics of business statistics. PO5, PO7
CO-2 Determine the value of the mean, the median, and the mode of ungrouped data. PO5, PO7
CO-3 Explains the disparity of data from one another delivering a precise view of the distribution of data. PO5, PO7
CO-4 Design, Evaluate and apply regression analysis. PO5, PO7
CO-5 Students will able to understand interpret indexes to identify trends in a data set. And what the trend, seasonality, cyclical irregularity in time series. PO5, PO7

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**III**	**2020 - 2021**	COM T37	BUSINESS LAW

Course Outcomes :

At the end of this course, students should be able to:

CO1 : Impacts the students in acquiring the basic knowledge regarding contracts in business (PO 7)
CO2 : Students acquires knowledge in the role of parties to the contract and impact of it to “QUID-

PRO-QUO" for the enforceability of the contract (PO 5)

CO3 : Students will have clarity on competency of persons, modes of discharge of contract, analysing and approaching to remedies in times of breach of contract.(PO7)

CO4 : Students get knowledge in law and procedure relating to sale of goods in Indian context. (PO 6)

CO5 : Students get knowledge in new dimensions in business Organisation to overcome constrains with reference to liability, capital and management of business. (PO7)

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (E.M)	**III**	**2020 - 2021**	COM T38	GOODS AND SERVICE TAXES

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Acquaint the students with basic principles of goods and service tax. PO5, PO7

CO2: Impart knowledge on various kinds of GST and GST rates. PO7

CO3: Comprehend the knowledge about tax invoice and composition levy scheme. PO5, PO7

CO4: Familiarize the students about value of supply and GST registration procedure. PO5

CO5: Familiarize the students with regard to GST Returns. PO5

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com(Banking & Insurance)	**IV**	**2020 - 2021**	COMT41A	CORPORATE ACCOUNTING

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: The students will have a good command on issue of shares and also forfeiture and reissue of shares. (PO.1)

CO 2: The students will be able to apply various modes for redemption of Debentures and also they can be able to utilize the free reserves for issue of bonus shares. (PO.4)

CO 3: The student will be able to determine the value of goodwill by using different methods. (PO.4)

CO 4: The students will have a good command on ascertainment of value of share by using Asset backing method and Yield method. (PO.4)

CO 5: The students will acquire the knowledge of preparing final accounts of companies as per the provisions of Companies Act 2013. (PO.7)

Program	Semester	Year	Course Code	Course Name
B.Com(Banking & Insurance)	**IV**	**2020 - 2021**	COMT45	Cost and Management Accounting

Course Outcomes:

At the end of the course, the student will able to;

CO1: Impart knowledge on the fundamental concept of cost accounting and management accounting. (PO1)

CO2: Comprehend the knowledge in effective control of raw materials, work in progress, and labourcost . (PO2)

CO3- Students will understand the profit making decisions in complex situations of any business Organisation (PO 4, 6)

CO4 – Students will critically understanding the financial and management accounting importancein understanding the business operations using different tools (PO 1)

CO5 – Students will critically understanding the cash and fund flow concept and impact of cashflow on business operations (PO 1, 7)

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**IV**	**2020 - 2021**	COMT43A	Income Tax

COURSE OUTCOMES:

At the end of the course the student will be able to

 Acquire the complete knowledge of the tax evasion, tax avoidance and taxplanning.

 Understand the provisions and compute income tax for varioussources.

 Grasp amendments made from time to time in FinanceAct.

 Compute total income and define tax complicacies and structure.

 Prepare and File IT returns of individual at hisown.

SEMESTER:IV No of Credits :4

Program	Seme	Year	Course	Course Name

	ster		Code	
B.Com (Banking & Insurance), B.Com Computers	**IV**	**2020 - 2021**	COMT48	Taxation

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1:Impact knowledge on the provisions of income tax law and practice PO4

CO2: Enlist the ability of provisions of income from salary and House property its taxability PO4

CO3: The student can acquire knowledge in calculation of business income and professional income PO06

CO4: Acquaint the students with basic principles of goods and service tax. (PO1,PO2)

CO5: To impart knowledge and best practices in corresponding to trade appliance at customs. (PO6)

SEMESTER: IV No of Credits: 4

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**IV**	**2020 - 2021**	COMT46	Auditing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Students will develop the knowledge & importance of auditing and accounting in modern era. (PO1)

CO2: Students will have the ability of understanding the applicability of auditing types for different organizations. (PO1, PO2)

CO3: Students will have knowledge in planning the effectiveness of auditing of any Organisation. (PO5, PO6, PO7)

CO4: Students will have proper understanding of the requirements of documentary evidence for the completion of audit. (PO1, PO2, PO3)

CO5: Students will have the knowledge of the competency of person, his rights and duties regarding auditing and audit report. (PO 6, PO7)

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**IV**	**2020 - 2021**	COMT47	Marketing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: To introduce the concepts of marketing and understand the factors influence the market environment. (PO1, PO6)

C02: Understand the consumer behaviour, its models and market segmentation process. (PO1)

C03: Understand the concepts of product mix, branding and to know the process of packaging and labelling to attract the

Customers. (PO1, PO7)

C04: Develop an idea about pricing strategies and pricing decisions. (PO4, PO5)

C05: Enhance the students about decisions regarding promotion and distribution channels. (PO2, PO7)

Program	Semester	Year	Course Code	Course Name
B.Com(Banking & Insurance)	**IV**	**2020 - 2021**	COMT49	Marketing of Financial Services

COURSE OUTCOMES:

At the end of the course the student will be able to

C01:To enlighten the students about the concepts and introduction of marketing.(PO1, PO6)

C02:To create awareness about overview of services marketing.(PO1,PO7)

C03: Develop an idea about pricing and promotion strategies of services. (PO4,PO5)

C04: Contributes to the development of strategies for the efficient and effective distribution

of services. (PO3, PO7)

C05: To create awareness about various retail financial services.(PO2)

Program	Semester	Year	Course Code	Course Name
B.Com(Honors)	**IV**	**2020 - 2021**	COHT41	Accounting for Corporate Issues

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: The student will be able to understand the concept of accounting standard and will have a good command on accounting standards in India. (PO.1) PSO1

CO 2: The students will have a good command on issue of shares and also forfeiture and reissue of shares. (PO.1) PSO1

CO 3: The students will be able to apply various modes for redemption of preference shares and also the can be able to utilize the free reserves for issue of bonus shares. (PO.4) PSO1

CO 4: The students will be able to know how to provide funds for the redemption of debentures. (PO.7) PSO1

CO 5: The students will acquire the knowledge of preparing final accounts of companies as per the provisions of Companies Act 2013. (PO.7) PSO1

Unit - I: Accounting Standards:

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com(Honors)	**IV**	**2020 - 2021**	COHT47	Cost Accounting

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1:Impart knowledge on the fundamental concept of cost accounting. (po1) PSO1

CO2: Comprehend the knowledge in effective control of raw materials and work in progress. (po2) PSO1

C03: Build an idea about incentive plans based on production and cost savings. (po4) PSO1

C04: Familiarize the students about the production progress with the help of departmental manager. (po4) PSO1

C05: Enlighten the students about the cost of contract and know the financial position. (po3, po5) PSO1

SEMESTER:IV No of Credits :4

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com(Honors)	**IV**	**2020 -**	COHT43	Corporate Laws

		2021		

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 – To impart knowledge on the concept of corporate personality and internal affairs.(PO 5, 6)

CO2 – To acquaint the effects of intellectual property rights on business and society as a whole and their legal careers. (PO 4&6)

CO3 – Students will be able to understand the law of partnership. (PO 3)

CO4- students will understand the characteristics of different negotiable instruments. (PO 4)

CO5- Students get knowledge in new dimensions in business Organisation to overcome constrains with reference to liability, capital and management of business.
(PO 3, 6)

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com(Honors)	**IV**	**2020 - 2021**	COHT49	Security Analysis

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1:To acquaint thorough knowledge about investment avenues and securities trading.(PO1)

CO2:To impart thorough knowledge of risk and return of different securities. (Po1)

CO3: To enlighten the valuation of ownership and creditorship securities.(Po5)

Co4: Evaluate the meaning of E-I-C framework and appreciate the benefit of this analysis to investors. (Po5)

CO5:To familiarize with basic terms and concepts of technical analysis and to apply these techniques in trading.(Po1, Po4)

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.B.A	**IV**	**2020 -**	MGTT43A	BUSINESS STRATEGY

		2021		

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 The basic concepts of business strategy, need, essentials, functions and effects of inadequate strategies

CO2 To understand the concept of strategic analysis, environmental scanning and strategic thinkers and their contributions.

CO3 This provides knowledge about strategy formulations, core competencies in strategy formulation.

CO4 To understand the strategic planning and implementation and integrating the functional plans and policies.

CO5 To understand the strategic management process , the criteria for effective strategy and the role of strategic management in policy making

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.B.A	**IV**	**2020 - 2021**	MGTT41B	PROJECT EVALUATION AND MANAGEMENT

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: It describes and explains the process of project evaluation, management various types of projects and generation of

ideas.

CO2: Identify the product mix, sales & production and how to analyze the data and prepare project proposal.

CO3: Identify various project evaluation techniques and methods of evaluation.

CO4: Describes the different aspects of project management manpower planning and prerequisites of project implementation.

CO5: It describes the types of project termination procedures evaluation of termination possibilities and closing of the project.

Program	**Semester**	**Year**	**Course Code**	**Course Name**

B.B.A	**IV**	**2020 - 2021**	MGTT45	BUSINESS RESEARCH METHODS

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Describe the process of Business Research, its scope and importance

CO2: Identify the dimensions of Research methodology and the types of Research design

CO3: Identify how Primary and Secondary data are collected during research along with the benefits and limitations of

Primary & secondary data

CO4: Appreciate the importance of sampling design in research along with the methods of Sampling

CO5: Describe how research data is analysed along with research report preparation

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.B.A	**IV**	**2020 - 2021**	MGTT48	E –COMMERCE

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Acquire the knowledge and understand the concept of business models and standards.

CO2: understand and analyze supply chain managements.

CO3: Understand and analyze different online payment methodologies

CO4: Able to understand E- customer relationship management.

CO5: Analyses e commerce models to learn emerging trends and challenges.

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.B.A	**IV**	**2020 - 2021**	MGTT44	OPERATIONS MANAGEMENT

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 This gives an idea of manufacturing and services operations, scope of production management, gives knowledge on the part of transformation of inputs to outputs by an effective production

department.

CO2 This understands the need of production facility factors, maintenance functions, decision making related to the production process in the congenial environment.

CO3 This shows distinctive competencies and strives to do better by improving the products and various processes of business through capacity planning and applying technological advancements in materials management.

CO4 This contributes the overall operations strategy to give competitive advantages to business by different procedures in production planning and controlling through various systematic study methods of operations management.

CO5 This gives knowledge on the techniques adopted for the job/work design helps in managing production more effectively implying inventory control methods and rectification of errors where highly affects in productivity. Also makes to learn about the quality perception commitment programmes, safety environment work areas which ensure the effectiveness of operations strategy.

Program	Semester	Course Code	Course Name
B.Com (E.M)	**III**	COM T37	Business Laws

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn basics of Business Laws and apply them in real life situations.

CO 2: find the role of different parties to the contract and impact of it "QUID – PRO – QUO" for the enforceability of the contract

CO 3: obtain clarity on Competency of persons, modes of discharge of contract, analyzing and approaching to remedies in times of breach of contract.

CO 4: acquire knowledge of Law and procedure related to sale of goods in India.

CO 5: find new dimensions of business organizations and how to overcome and constraints with reference to liability, capital and management of business.

Program	Semester	Course Code	Course Name
B.Com English Medium.	**V**	COM T01	Commercial Geography

At the end of the course student will

CO 1: learn the importance of human resources and agriculture produce, minerals and its distribution

in the world.

CO 2: acquire specific knowledge of the production of food – crops in the world, their consumption and short falls.

CO 3: get knowledge about the importance of forest and relevant acts for its conservation.

CO 4: obtain importance of minerals and its uses to the society.

CO 5: able to understand the peninsular rivers and the issues and challenges in world in inter linking of rivers.

Program	Semester	Course Code	Course Name
B.Com (E.M)	V	COM T51	Cost Accounting

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get knowledge of cost concepts, elements of cost and costing techniques.

CO 2: learn how to apply costing techniques.

CO 3: obtain knowledge of effective control of raw materials and work in progress.

CO 4: learn the calculation of labour cost, incentives and remuneration.

CO 5: know about job and contract costing.

Program	Semester	Course Code	Course Name
B.Com (E.M)	**V**	COM T53	Taxation

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn the basic concepts of Income tax and Computation of income tax.

CO 2: learn how to compute income from salary and house property.

CO 3: find how to compute income from Business and Profession and other Sources.

CO 4: understand the basic principles of Goods and Services Tax.

CO 5: acquire knowledge of Customs Act and Types of Customs Duties.

Program	Semester	Course Code	Course Name

B.Com (E.M)	**V**	SEC 003	Project Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: apply the concepts and techniques in appraising all aspects of projects.

CO 2: recognize the changes in the economic trends that lead to project ideas.

CO 3: analyse the performance of projects and demonstrate the business project strategies.

CO 4: acquire the capabilities to investigate complex business problems to propose project-based solutions.

Program	**Semester**	**Course Code**	**Course Name**
B.Com (E.M)	**VI**	COM T63	Management Accounting

At the end of the course student will

CO 1: acquire knowledge of Management Accounting and its applications.

CO 2: understand the Funds Flow and Cash Flow statements, concepts and their applications on business operations.

CO 3: get knowledge of ratio analysis, its limitations and interpretations.

CO 4: be familiar with CVP analysis, concepts, Contribution – Marginal Cost Equation, Profit Volume Ratio and Break Even Point.

CO 5: get the ability of assessing solvency and profitability of business organizations.

Program	**Semester**	**Course Code**	**Course Name**
B.Com (E.M)	**VI**	COM T62	Auditing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn knowledge of basic concepts of Auditing.

CO 2: be acquainted with Auditing procedures.

CO 3: get knowledge in planning the effectiveness of auditing of business organizations.

CO 4: be familiar with the applicability of Auditing types for different organizations.

CO 5: be able to understand the contents of audit and business reports.

Program	Semester	Course Code	Course Name
B.Com (E.M)	**VI**	COM T61	Marketing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of Marketing concepts and the factors that influence the market environment.

CO 2: know 7P‟s of Marketing Mix.

CO 3: be familiar with buyer behaviour models and consumer behaviour.

CO 4: have knowledge of pricing decisions and product mix.

CO 5: obtain knowledge of promotion and distribution channels.

Program	Semester	Year	Course Code	Course Name
B.Com (E.M)	**II**	**2020 - 2021**	COMT22B	**BANKING THEORY &PRACTICE**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1. Understand the basic concepts of banks and functions of commercial banks.

CO2. Demonstrate an awareness of law and practice in a banking context.

CO3. Engage in critical analysis of the practice of banking law.

CO4. Organize information as it relates to the regulation of banking products and services.

CO5. Formulate the procedure for better service to the customers from various banking innovations.

Program	Semester	Year	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**II**	**2020 - 2021**	COMT21A	**FINANCIAL ACCOUNTING – I**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1-Gain an understanding with regard to special transactions related to accounting for consignment.**PSO1**

CO2- Grasp the accounting treatment in issue of negotiable instruments and also learn the techniques of accounting to bills.**PSO1,PO4**

CO3 Gain the knowledge with regard to special transactions relating to joint Venture business.**PSO1, PO7**

CO4 Able to ascertain the profitability and financial position of an enterprise by using statement of affairs method and conversion method.**PSO1**

CO5 Get the knowledge of importance of inventory in ascertainment of profitability and financial position by determining the correct value of inventory.**PSO1, PO5**

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (Honors)	**I**	**2020 - 2021**	SDCCOMT02	OFFICE SECRETARYSHIP

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1:Understand the organizational hierarchy and outlines of functioning

CO2:Comprehend the role of office secretaryship in a small and medium organization

CO3. Acquire knowledge on office procedures and interpersonal skills

CO4. Apply the skills in preparing and presenting notes, letters, statements, reports in different situations.

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (Honors)	**I**	**2020 - 2021**	COHT11	FUNDAMENTLS OF ACCOUNTING

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1. To appraise the students about need and importance of Accounting Concepts

and Conventions.

CO2. To understand the reasons for difference between Cash book and Pass book balance and how to resolve such difference in a systematic manner.

CO3. To determine the amount of depreciation from the total value of the fixed asset and to understand various methods of depreciation.

CO4) To impart the students, knowledge about preparation of final accounts, otherwise known as the financial statements

CO5. To appraise the students about the application of accounting knowledge in rectification of errors.

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (Honors)	**I**	**2020 - 2021**	COHT12B	Business Organization and Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Recall the basic knowledge on conceptual areas such as commerce, trade and industry of different types of business organisations. (PO4, PO5)

CO2 Articulate the Fundamentals of Joint Stock Company as per Companies Act 2013. (PO2, PO4, PO5)

CO3 Discuss and implement the managerial traits and talents essential formanaging business.(PO1, PO4, PO5)

CO4 Analyse the purpose of planning and organising in various types offirms and companies. (PO1, PO4, PO5)

CO5 Evaluate the tools and techniques of recruitment and controllingprocess. (PO1, PO4, PO5)

Program	**Semester**	**Year**	**Course Code**	**Course Name**

B.Com (Honors)	**I**	**2020 - 2021**	COHT13A	Banking Theory and Practice

CO1 Articulate the operations, structure and importance of various financial institutions. (P01, PO6)

CO2 Analyse the organisation structure and working of RBI. (P01, PO6)

CO3 Employ the services of e-banking services. (P01, PO6)

CO4 Articulate the principles procedures followed by commercial banks for granting loans and advances.

(P01, PO6)

CO5 Appraise the relationship of a banker with is customers.(P01, PO6)

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (Honors)	**II**	**2020 - 2021**	COHT22A	**BUSINESS ENVIRONMENT**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Understand how an entity systematically explores the external environment in which business operates.

CO2: To enlighten/familiarize the impact of economic environment and its effect on government policies for development of business.

CO3: To acquire specialized knowledge relating to economic policies in India.

CO4: critically examine the economic, social political and legal environment components in business decision making.

CO5: synthesize multiple perspective to formulate responses to opportunities and institutions in international environment.

Program	**Semester**	**Year**	**Course Code**	**Course Name**

B.Com (Honors)	**II**	**2020 - 2021**	COHT23	**QUANTITATIVE METHODS**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: To describe a data set including both categorical and quantitative variables to support a statement.

CO2: To analyse statistical data using measures of Central tendency, dispersion and location.

CO3: To calculate the simple linear regression equation for a set of data to know the basic assumptions behind regression analysis.

CO4: To describe the steps of matrix and what they represent.

CO5: To calculate probability using the addition and multiplication rules.

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.Com (Honors)	**II**	**2020 - 2021**	COHT24	**ELEMENTS OF FINANCIAL MANAGEMENT**

COURSE OUTCOMES:

At the end of the course the student will be able to

- CO1: Impart thorough knowledge about financial management and how it has evolved over a
- Period of time**.**
- CO2: able to identify the importance of financial planning for corporate companies.
- CO3;Demonstrate knowledge of the value of money over the time and its uses.
- CO4: Develop an idea about multiple sources of finance and analyse the main ways of rising
- Capital and their respective advantages and disadvantages in different circumstances.
- CO5: .Analyse the complexities associated with management of cost of funds in the capital Structure.

Program	**Semester**	**Year**	**Course Code**	**Course Name**
B.B.A	**I**	**2020 - 2021**	MGTT15	**MANAGEMENT PROCESS**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Outline the management principles and practices in terms of their relevance in running business organisations effectively.

CO2 Interpret the interdependence of various functions in management process and relate how one function impacts the other.

CO3 Determine the impact of various management practices on the efficiency and effectiveness of an organisation.

CO4 Distinguish among different management practices against a given situation and make an appropriate choice of strategy that can yield better results.

Program	Semester	Year	Course Code	Course Name
B.B.A	**I**	**2020 - 2021**	ECOT19	**MANAGERIAL ECONOMICS**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Understand the basic definitions and concepts of Managerial Economics (Po1)

CO2: Demonstrate the law of demand its price elasticity and law of supply (Po1, PO2)

CO3: Acquire knowledge on concepts of cost, nature of production, revenue and its relationship to business operations. (Po1, PO2)

CO4: Integrates the concepts of price and output decisions of firms under various market structures (Po1, PO3 & PO4)

CO5: Able to identify the components and process of calculating National Income and phases of trade cycles (Po1, PO3, PO4 & PO6)

Program	Semester	Year	Course Code	Course Name
B.B.A	**I**	**2020 - 2021**	MITT11	**IT FOR MANAGERS**

COURSE OUTCOMES:

At the end of the course the student will be able to

1. Bridge the fundamental concepts of computers with the present level of knowledge of the students.
2. Familiarize operating systems, programming languages, peripheral devices, networking, multimedia and internet.
3. Analyze computers at user level, including operative systems and programming environments.
4. Acquire knowledge of computer equipment, including both hardware and software.
5. Understand internet tools and computer security

Program	Semester	Year	Course Code	Course Name
B.B.A	**II**	**2020-2021**	MGTT210	**ACCOUNTING FOR MANAGERS**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Outline the basic concepts of accounting in terms of their relevance to the business transactions.

CO2 To understand the basic principles of accounting in terms of their relevance to recording business transactions.

CO3 Apply the principles of accounting for making journal entries, ledgers, trail balance and preparing final accounts.

CO4 Interpret the procedure for computation of depreciation and consignment accounting.

Program	Semester	Year	Course Code	Course Name
B.B.A	**II**	**2020-2021**	MGTT25	**BUSINESS ENVIRONMENT**

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1 Outline various elements that constitute internal business environment along with their respective impact on business. (L1 &L2)

CO2 Understand the relative impact of elements of external environment of business- both micro and macro elements. (L1&L2)

CO3 Interpret the repercussions of existing business environment in the country. (L3)

CO4 Interpret the challenges and the implications of international business environment. (L3)

Program	Semester	Year	Course Code	Course Name
B.B.A	**II**	**2020 - 2021**	STAT22	**Quantitative Methods for Managers**

COURSE OUTCOMES:

At the end of the course the student will be able to

- Students will be able to use the basic Statistical terms and will acquire knowledge of Analyzing, comparing different data sets and also able to organize, present and interpret the statistical data both numerically and graphically.
- Students will be able to know the complementary relationship of skewness with measures of central tendency and dispersion in describing a set of data.
- Students will understand the concept of probability distributions, and also, they can apply different discrete distributions at appropriate situations.
- Students can identify the direction and can compute and interpret the strength of the correlation coefficient by various methods and also can develop a deeper understanding of the linear regression model and its limitations.
- The students will be able to compare the efficiency of the various methods of sampling.

Program	Semester	Course Code	Course Name
BBA	**III**	MGT T34	Marketing M

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of Marketing concepts and the factors that influence the market environment.

CO 2: understand Different Stages in Product Life Cycle and learn how to make Product decisions.

CO 3: get knowledge of pricing decisions.

CO 4: know about decisions regarding promotion.

CO 5: know the importance and different types of Marketing Channels.

Program	Semester	Course Code	Course Name
B.Com (Honors)	**III**	COHT37	Financial Management

At the end of the course student will

CO 1: know how to get Finance from different Sources.

CO 2: acquire knowledge of making different Financial Decisions.

CO 3: learn calculation of Present Value of Money.

CO 4: obtain knowledge of Calculate Cost of Capital and Capital Structure of a Company.

CO 5: understand how to make different Dividend Decisions in Companies.

CO 5: know the Significance of Corporate Social Responsibility in India.

Program	Semester	Course Code	Course Name
BBA	**V**	MGT T51	Business Law

At the end of the course student will CO 1: learn basics of Business Laws.

CO 2: acquire knowledge of the role of different parties to the contract and impact of it "QUID – PRO – QUO" for the enforceability of the contract.

CO 3: learn about the types of Partners, Contents of Partnership Deed and the importance of registration of Partnership Deed.

CO 4: know about Law and procedure related to sale of goods in India.

CO 5: obtain knowledge of Right to Information Act 2015, Consumer protection Act 1986 and GST.

Program	Semester	Course Code	Course Name
BBA	V	MGT T52	Taxation

At the end of the course student will

CO 1: learn the basic concepts of Income tax and computation of income tax.

CO 2: learn how to compute income from salary.

CO 3: acquire knowledge of Computation of Income from House property.

CO 4: get an idea on how to compute income from Business, Profession and Capital Gains.

CO 5: understand the basic principles of Goods and Service Tax.

Program	Semester	Course Code	Course Name
BBA	**V**	MGT TEL53	Purchase Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get the basic knowledge of the functionality and the relationships among the players.

CO 2:acquire knowledge of purchase functions, purchase procedure, purchase order mechanism and tendering.

CO 3: be familiar with vendor analysis, criteria for evaluation of vendor and maintenance of vendor relations and its rating.

CO 4: know buyer supplier relationships and developing and managing collaborative and alliance relationships and their problem solving.

CO 5: get knowledge of supply Chain Management and its challenges of cross functional teams and prerequisites for its success.

Program	Semester	Course Code	Course Name
BBA	**V**	MGT TEL54	Stores Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire basic overview about the stores are professionally managed.

CO 2: get knowledge of stores functions, relationship with other departments coding of materials and methods of coding.

CO 3: learn stock control techniques, approaches to control, ABC Analysis, Obsolescence and Redundancy and stock checking.

CO 4: be familiar with stores operations and control of substances Hazardous to Health Regulations.

CO 5: obtain knowledge of Procedure Manuals and implementation of the manuals.

Program	Semester	Course Code	Course Name
BBA	**VI**	MGT T63	Business Strategy

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire Knowledge of Concepts of Business Strategy.

CO 2: understand the Strategic Analysis and the Importance of Strategic Thinker in Policy Making.

CO 3: learn how to Formulate the Strategies in Business Organizations.

CO 4: study the Strategic Planning Process and how it is Implemented for the Success of Business.

CO 5: to give an idea about Strategic Management.

Program	Semester	Course Code	Course Name
BBA	**VI**	MGT T62	Micro, Small & Medium Enterprises Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn the problems faced by Small and Medium Enterprises (SME‟S) and support given by the government to promote the SMEs in backward areas.

CO 2: acquire knowledge to start a new enterprise.

CO 3: know management functions like Finance in SME‟s.

CO 4: analyse the problems faced by the sick units and how to prevent sickness.

CO 5: develop the innovative ideas among the students for start-ups.

Program	Semester	Course Code	Course Name
BBA	**VI**	MGT T61	Project Evaluation & Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: develop an understanding of basic concepts of Project Evaluation and Management.

CO 2: acquire knowledge of Market, Demand and Technical Analysis.

CO 3: apply the techniques of Project Evaluation to make management decisions. **CO 4:** know the critical implications related to human aspects of project management. **CO 5:** learn about project termination and its procedure.

Program	Semester	Course Code	Course Name
BBA	**VI**	MGT TEL63	Agriculture and Rural Marketing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get basic understanding of concepts of Rural Marketing with a focused approach on Agricultural Marketing with special reference to India.

CO 2: learn the concept of Rural market, characteristics, affect of environment on Rural market and Agricultural Market Yards.

CO 3: acquire knowledge of Rural consumer behaviour, Rural Vs Urban Consumer, Life Style Marketing and Rural Market Segmentation.

CO 4: be familiar with Agriculture Support Mechanism i.e. Role Of CCI, Tabaco Board, Spices Board, Tea Board and Agriculture Price Commission.

CO 5: obtain knowledge of export potential for Agro Based Products and Role of Government and Non- Government Agencies in the development of Rural and Agricultural Marketing.

Program	Semester	Course Code	Course Name
BBA	**VI**	MGT TEL64	Warehouse Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: have conceptual understanding of Warehousing operations and their significance in Retail business.

CO 2: learn functions of warehouse, WMS, Strategic Planning and Supply Chain and Warehousing.

CO 3: understand the role of Warehousing in retail and its challenges.

CO 4: obtain knowledge of health and safety risks at warehouse, Assessment of Risk, Management of Health and Safety Risk.

CO 5: be familiar with Warehousing practices such as FCI, CWC and Reliance.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**II**	AOC T03	Principles of Life Insurance

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of principles of Life Insurance, types of Insurance, need and its importance.

CO2: have knowledge of various policies of Life Insurance.

CO 3: learn conventional policies of Life Insurance.

CO 4: Know contemporary and special policies of Life Insurance.

Program	Semester	Course Code	Course Name
BBA, B.Com(H)	**I**	ECO T19	Managerial Economics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of the definition of Economics and Laws of Utility.

CO 2: understand Law of demand and Law of Supply, Price Elasticity of Demand.

CO 3: learn the concepts of Cost and Revenue demonstrate the short run and long run cost curves and relationship between AR and MR.

CO 4: be aware of classification of Market on the basis of competition.

CO 5: understand the Trade Cycle and know the concepts of National Income.

Program	Semester	Course Code	Course Name
BBA	**I**	MGT T15	Management Process

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand the concepts of Management Process and Principles of Management.

CO 2: acquire the knowledge of the planning function of Management.

CO 3: learn how to manage the types of organization.

CO 4: acquire knowledge of communication, motivation and leadership styles.

CO 5: learn how to control the business organizations.

Program	Semester	Course Code	Course Name
BBA	**II**	MGT T25	Business Environment

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand the significance and elements of Business Environment.

CO 2: find out the elements of Socio – Cultural and effect of Technological Environment on the business.

CO 3: identify the impact of Political and Legal Environment on business and create awareness on Consumer Protection Act.

CO 4: acquire knowledge of elements of Economic Environment, Economic Systems and know the importance of Economic plans and Policies in India.

CO 5: find elements of International Business Environment and the role of NRI‟s in Indian Corporate Sector.

At the end of the course student will

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**III**	COM T32	Business Statistics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: have knowledge of the Application of Statistical Tools and Techniques in Business Decision making.

CO 2: Learn the measures of Central tendency and variability in Statistical data and its interpretation measures.

CO 3: identify basic Statistical Analysis used in sociological inquiry and measures of dispersion and skewness.

CO 4: have knowledge of measures of relation such as Correlation and Regression.

CO 5: analyse statistical patterns and associations that can be generated to the larger social world by explaining time series and index numbers.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**II**	COM T22B	Banking Theory and Practice

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn about Banking and Financial services by explaining the essence of commercial banks and its latest trends.

CO 2: have knowledge of innovations of the Current Banking system like E – Banking and advancements.

CO 3: acquire knowledge of the operations and structures of different financial institutions.

CO 4: understand the relationship between banker and customer and KYC norms, Am buds man.

CO 5: acquire knowledge of duties and responsibilities related to paying and collecting bankers.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**IV**	AOC T04	Insurance Law and Regulations

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand Insurance law and regulations and its meaning, purpose and application.

CO 2: learn about insurable interest and transfer of interest and policy.

CO 3: acquire knowledge of Utmost Good Faith and Non-disclosure and Concealment.

CO 4: impart knowledge of Insurance law i.e., The Insurance Act1938, IRDA Act 1999, IRDA and its functions and powers.

CO 5: compute income from business or profession.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**V**	COM T51	Cost Accounting

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn knowledge in cost concepts, elements of cost and costing techniques,

CO 2: learn how to apply costing techniques.

CO 3: acquire knowledge of effective control of raw materials and work in progress.

CO 4: learn the calculation of labour cost and incentives and remuneration.

CO 5: acquire knowledge of job and contract costing.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**V**	COM T52	GST

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand the basic principles of goods and services tax.

CO 2: acquire the knowledge of Levy and collection of tax.

CO 3: provide knowledge of registration and filing of GST.

CO 4: learn about the provisions of integrated goods and services tax.

CO 5: know about authorities of GST.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**V**	COM T01	Commercial Geography

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn the importance of human resources and agriculture produce, minerals and its distribution in the world.

CO 2: acquire specific knowledge of the production of food – crops in the world, their consumption and short falls.

CO 3: acquire knowledge about the importance of forest and relevant acts for its conservation.

CO 4: know importance of minerals and its uses to the society.

CO 5: understand the peninsular rivers, the issues and challenges in world in interlinking of rivers.

Program	Semester	Course Code	Course Name

B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**V**	COM TEL57	Purchase Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be provided with basic knowledge of the functionality and the relationships among the players

CO 2: acquire knowledge of purchase functions, purchase procedure, purchase order mechanism and tendering.

CO 3: have knowledge of vendor analysis, criteria for evaluation of vendor and maintenance of vendor relations and its rating.

CO 4: know buyer supplier relationships and developing and managing collaborative and alliance relationships and their problem solving.

CO 5: learn about supply chain management and its challenges of cross functional teams and prerequisites for its success.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	V	COM TEL58	Stores Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get a basic overview of how the stores are professionally managed.

CO 2: acquire knowledge of functions of stores, relationship with other departments, coding of materials and methods of coding.

CO 3: know stock control techniques, approaches to control, ABC Analysis, Obsolescence and Redundancy and stock checking.

CO 4: familiarize with stores operations and control of substances Hazardous to Health Regulations.

CO 5: get knowledge on procedure manuals and its implementation of the manuals.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	V	COM TEL510	Central Banking

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of functions of Central Bank, development of Central Bank and its functions.

CO 2: get knowledge of Monetary and credit policies, Price control of RBI, supervision and regulation of banks.

CO 3: the role of Reserve Bank of India – Constitution and Governance its recent developments, RBI act and Interface between RBI and Banks.

CO 4: know about inflation and price control by RBI and its intervention mechanisms.

CO 5: learn the effect of liberalization and globalization and also supervision and regulations of banks.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**V**	COM TEL59	Rural and Farm Credit

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of concept of rural credit, objectives, significance, classification and General Credit Card.

CO 2: know about various rural credit agencies for financing agriculture and rural development, Self Help Groups.

CO 3: because familiar with sources of farm credit i.e. PACS – APCOB – NABARD and Lead Bank Scheme.

CO 4: get knowledge of farm credit analysis, 3C‟s of credit, Crop index reflecting use and farm credit.

CO 5: know about rural credit survey reports.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**V**	COM PEL51&52	Commerce Lab

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire practical knowledge of documentation skills, verification of forms in banking operations

and preparation of audit programs and financial services.

CO 2: get knowledge and best practices in documentation of firm.

CO 3: be familiarized and gain practical knowledge about various bank forms.

CO 4: be able to learn filing of IT returns and computation of tax liability.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**V**	SEC 003	Project Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: apply the concepts and techniques in appraising all aspects of projects.

CO 2: recognize the changes in the economic trends that lead to project ideas.

CO 3: analyse the performance of projects and the business project strategies.

CO 4: acquire the capabilities to investigate complex business problems to propose project-based solutions.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**VI**	COM T63	Management Accounting

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of Management Accounting and its applications.

CO 2: understand Funds Flow and Cash Flow statements, concepts and its applications on Business operations.

CO 3: get knowledge on ratio analysis, its limitations and interpretations.

CO 4: be familiarized with CVP analysis, concepts, Contribution – Marginal Cost Equation, Profit Volume Ratio and Break Even Point.

CO 5: have the ability of assessing solvency and profitability of business organizations.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**VI**	COM T62	Auditing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: impart knowledge pertaining to basic concepts of Auditing.

CO 2: be acquainted with auditing procedures.

CO 3: have the knowledge in planning the effectiveness of auditing of business organizations.

CO 4: be familiarized with ability of understanding the applicability of auditing types for different organizations.

CO 5: be able to understand the contents of audit and business reports.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**VI**	COM T61	Marketing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: To acquire knowledge of Marketing concepts and the factors that influence the market environment.

CO 2: knows of Marketing Mix.

CO 3: be familiar with buyer behaviour models and consumer behaviour.

CO 4: get knowledge on pricing decisions and product mix.

CO 5: learn to take decisions about promotion and distribution channels.

At the end of the course student will

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**VI**	COM TEL66	Agriculture And Rural Marketing

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get a basic understanding of concepts of Rural Marketing with a focused approach on Agricultural Marketing with special reference to India.

CO 2: learn the concept of Rural market, characteristics, effect of environment on rural market and Agricultural Market Yards.

CO 3: acquire knowledge of Rural Consumer Behaviour, Rural Vs Urban Consumer, Life Style Marketing and Rural Market Segmentation.

CO 4: be familiarize with Agriculture Support Mechanism i.e Role of CCI, Tabacco Board, Spices Board, Tea Board and Agriculture Price Commission.

CO 5: get knowledge of Export potential for Agro Based Products and Role of Government and Non-Government Agencies in the development of Rural and Agricultural Marketing.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**VI**	COM TEL67	Warehouse Management

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get conceptual understanding of Warehousing Operations and their significance in Retail business.

CO 2: have knowledge of Functions of Warehouse, WMS, Strategic Planning and Supply Chain and Warehousing.

CO 3: understand the role of Warehousing in retail and its challenges.

CO 4: learn about health and safety risks at warehouse, Assessment of Risk, Management of Health and Safety Risk.

CO 5: be familiar with Warehousing practices such as FCI, CWC and Reliance.

At the end of the course student will

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance)	**VI**	COM TEL68	Financial Services

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of role of Financial Services, Banking and Non-Banking activities

CO 2: have knowledge of Leasing and Hire Purchases and other Financial Services.

CO 3: be familiar with Merchant Banking Services, Scope and Importance, Venture Capital Scrutinization, Demat Services and Commercial papers.

C**O 4:** get knowledge of Credit Rating Agencies like CRISIL and CARE and Mutual Funds.

CO 5: understand Factoring and Forfeiting – Procedural and Financial Aspect and Central Depository Systems like NSDL, CSDL.

Program	Semester	Course Code	Course Name
B.Com (E.M) B.Com (Computers) B.Com (Banking & Insurance).	**VI**	COM TEL69	Marketing of Financial Services

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: acquire knowledge of Marketing of Financial Services, Managing Service Counters, Integrated Service Management and Service Elements.

CO 2: learn pricing and promotion strategies and retailing of Financial Services.

CO 3: know Pricing and Promotion Strategies and B2B Marketing.

CO 4: have knowledge of Cost and Revenue Management Approaches for Providing services, Channels and Designing and Managing Service Processes.

CO 5: be able to understand Investment Services, Insurance Services and Credit Services.

Program	**Semester**	**Course Code**	**Course Name**
B.Com (E.M)	**III**	COMT38	GOODS AND SERVICE TAX

CO1: Acquaint the students with basic principles of goods and service tax. **PO5,PO7**
CO2: Impart knowledge on various kinds of GST and GST rates. **PO7**
CO3: Comprehend the knowledge about tax invoice and composition levy scheme. **PO5,PO7**
CO4: Familiarize the students about value of supply and GST registration procedure. **PO5**
CO5: Familiarize the students with regard to GST Returns. **PO5**

Program	**Semester**	**Course Code**	**Course Name**
B.Com B&I	**III**	COMT39	LAWS RELATING TO INSURANCE

CO1: To learn about knowledge of Contract Act, Bailment and Pledge
CO2: To understand Indian Insurance Act -1938 & 1956
CO3: Articulate the IRDA and its powers, duties and regulations
CO4: To provide knowledge on Actuary
CO5: Discuss and implement Code of Conduct for Surveyors and loss Assessors

Program	Semester	Course Code	Course Name
B.Com(H)	**III**	COH T38	AUDITING

CO1 Students will develop the knowledge & importance of auditing and accounting of any Organisation (PO 5)
CO2 – Students will have the ability of understanding the applicability of auditing types for different organizations (PO6)
CO3 – Students will have knowledge in planning the effectiveness of auditing of any Organisation (PO6 PO7)
CO4 - Students will have proper understanding of the requirements of documentary evidence for the completion of audit (PO6)
CO5- Students will have the knowledge of the competency of person, his rights and duties regarding auditing and audit report. (PO 6,7).

Program	Semester	Course Code	Course Name
B.Com(H)	**III**	COH T36	DIRECT TAX

CO1: Acquire knowledge about tax rate schedule and residential status of an individual **PO5**
CO2: Enlist the ability of provisions of income from salary and its taxability **PO5**
CO3: The student can build on idea about income from house property and its taxability **PO5**
CO4: The student can acquire knowledge in calculation of business income and professional income **PO5**
CO5: Impart knowledge on deductions u/s 80 and build an idea about compute gross total income.**PO7**

Program	Semester	Course Code	Course Name
B.Com(H)	**III**	COH T39	**MARKETING MANAGEMENT**

CO1 Acquire understanding of fundamental concepts, scope and vital functions performed by the core marketing department in a business organisation. (L1, L2)
CO2 Understand the ethical and legal implications of product decisions, Pricing decisions as well as promotional & distribution decisions. (L2)
CO3 Appreciate the modern marketing practices and influences in the marketing situations while dealing with marketing problems and making strategies. (L3)
CO4 Apply the principles of Marketing management to identify the most appropriate strategies that yield desired results for a given marketing organisation. (L3)

Program	Semester	Course Code	Course Name
B.Com(H)	**III**	COH T33A	*BUSINES S LAWS*

CO1 : Impacts the students in acquiring the basic knowledge regarding contracts in business and the role of parties to the contract and impact of it to "QUID-PRO-QUO" for the enforceability of the contract. (PO7 PO5)
CO2: Students will have clarity on competence of persons to the contract and their role in agreement for its enforceability. (PO 5)
CO3 : Students will have clarity on certain special type of contractual relationships. (PO 5)
CO4 : Students get knowledge in law and procedure relating to sale of goods in Indian context. (PO 6
CO5 : Students get knowledge on protection given by existing Law and Practice relating to consumer protection. (PO5, PO7)

Program	Semester	Course Code	Course Name
B.Com(H)	**III**	COH T31	**FINANCIAL ACCOUNTING – II**

CO1: Student will be able to understand different situations to calculate interest on various instalments and understand need for re-possession and the procedure in case of default.-PO5
CO2: Student will be able to understand Profit & Non-profit concern and to ascertain the surplus/deficit relating to various non-trading concerns –PO5, PO6
CO3: Student will get the knowledge of partnership business, its accounts and modes of settlement in case of partnership restructuring.- PO6, PO7
CO4: Student will acquire the capacity to settle the accounts in case of dissolution by realization of various assets.-PO5, PO6
CO5: Student will obtain the knowledge of branch accounting procedure and the process of conversion of foreign branch transactions into Indian currency.-PO7

DEPARTMENT OF HISTORY

Program	Semester	Course Code	Course Name
B.A(HEP)	I	HIST11B	Ancient Indian History and Culture from indus valley civilization

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn to think explicitly about the aims of Indian History and Culture.

CO 2: acquire knowledge of Indian religions such as Buddhism and Jainism.

CO 3: Evaluate the south Indian administration and cultural development Pallavas

CO 4: classified the nature of Golden age of Guptas.

CO 5: Evaluate the south Indian administration and cultural development Cholas.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	II	HIS T21B	Medival History and Culture from 647 A.D to 1526A.D

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of Balban, AllauddhinKhilji, Md. Bin Tughlaq – Administration.

CO 2: Evaluate the Impact of Islam on Indian Society and Culture – Bhakti Movement.

CO 3: be acquainted with Indian kingship and culture – Mughal Empire – Akbar, Jahangir, Shah Jahan, Aurangazeb.

CO 4: Analyse social religious conditions of Mughal Empire.

CO 5: promote Knowledge about the advent of the Europeans..

Program	Semester	Course Code	Course Name
B.A(H.E.P)	III	HIST31A	Modern Indian History and Culture of India from (1206 A.D to 1764 A.D)

COURSE OUTCOMES:

At the end of the course the student will be able to

Course Outcomes:

1. Aquired the knowledge of British rule and 1857 revolt
2. Learnt about the social and religious system of India
3. Gained the knowledge about freedom struggle
4. Inspired by the National leaders like gandhiji and their ideologies

Thoroughly learned about partition of india and integration of princely states Syllabus.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	IV	HIST42	History and Culture of Andhra from(1512 to1956 A.D)

COURSE OUTCOMES:

Course Outcomes:

1. Known about Nizams of Hyderabad
2. Learnt the impact of British on Andhra - Monroe- C. P Brown, Sir Arthur Cotton

3. They were aware of social reformers and their contribution
4. Acquired knowledge about the national leaders and their ideologies
5. Acquainted with the knowledge of A. P state formation & Andhra pradesh formation

Program	Semester	Course Code	Course Name
B.A(H.E.P)	IV	HIST43	History of modern world from 15TH Cent.to 1945A.D

Course Outcomes:

1. Acquired the knowledge about the evolution of changes in the modern europe
2. Learnt about revolution and their impact on world
3. Had idea about the unification of Italy and Germany
4. Learnt lessons from world war 1&2
5. Gained knowledge about the work and importance of international organizations.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**V**	HIST51	History of Modern World From 1453- 1821A.D

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand the range of economic structure of Europe-Feudalism.

CO 2: be able to explore the reasons for Renaissance and reformation in Europe.

CO 3: analyze the importance of the Age of revolutions.

CO 4: be able to know about the American revolution.

CO 5: offer multi-causal explanations of major change in world- French revolution.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	V	HIST52	History and Culture of Andhra from Sathavahanas to 1857A.D

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of early kingdoms of Andhra.

CO 2: able to analyze the glory of Vijayanagara Empire.

CO 3: learn to evaluate the administration and structure of Qutubshahi dynasty.

CO 4: be able to communicate the arrival of Europeans and their rule in Andhra to others.

CO 5: acquaint with the revenue reforms of Europeans and apply them to the present society.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	HIS TEL61	Elective – I History of Modern World 1821 -1945A.D

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: demonstrate knowledge of Industrial Revolution.

CO 2: able to interpret the unifications of Germany and Italy.

CO 3: able to analyse the communist principles and its impact on world.

CO 4: evaluate the impact of European alliances and influence of world wars.

CO 5: acquaint with the organs and functions of UNO.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	HIS TCL61	Popular Movements in Andhra Desa from 1857-2014.

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand the key concepts of socio religious movements of Andhra Pradesh.

CO 2: able to analyze the role of Andhra leaders in the Freedom movement.

CO 3: understand the importance of teamwork in freedom movement**.**

CO 4: be able to communicate the sacrifice of Potti Sri Ramulu in Andhra state formation.

CO 5: able to compare relate the development of Andhra Pradesh in past with the present scenario by applying modern techniques.

DEPARTMENT OF ECONOMICS

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**I**	ECOT11B	Micro Economic Analysis

At the end of the course student will

CO1-Able to understand the Definitions of Economics, differences between Micro economics and Macro Economics.

CO2- Able to understand the factors determining demand Law of Demand - reasons and exceptions Elasticity of Demand and Indifference Curve analysis

CO3- Able to understand the various Cost curves and Revenue Curves Concepts of Production function , Law of variable propositions , law of Return to Scale.

CO4- Able to understand the Different Markets and its Equilibrium

CO5- Able to understand the Different theories of Rent, Profit and interest.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**II**	ECOT21B	Macro Economics-Analysis

At the end of the course student will

CO1 -Able to understand Various concepts, definitions, and measure methods of National Income

CO2 -Able to understand different theories of employment,Consumption, Investment functions

CO3- To understand the functions of Money , different theories of Money,and functions of Commercial Banks, RBI

CO4- Able to understand the causes and remedial measures of Trade Cycles and Inflation

CO5- Able to understand the functions of money and Capital markets ,Stock Exchanges and Insurance

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**III**	ECOT31B	Development Economics

At the end of the course student will

CO1 - To acquire the knowledge about the scope, importance of economic growth and

economic development

CO2 - To acquire the knowledge about the modern theories of economic growth

CO3- To acquire the knowledge about the theories of Development and under Development

CO4- To acquire knowledge about the strategies of economic development

CO5- To acquire knowledge about the role of institutions in economic development

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**IV**	ECOT41B	Economic Development in India and Andhra Pradesh

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Able to understand Economic growth and development

CO 2: Able to understand different growth models like Harrod –Domar, Bigpush etc.

CO 3: Able to understand different theories of Economic development like Adamsmith, Karlmarks, Rostow etc.

CO 4: Able to understand different issues of Indian Economy.

CO 5: Able to know Economic Reforms(LPG)

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**IV**	ECOT42	Statistical methods for Economics

CO 1: Able to understand basics of statistics

CO 2: Able to understand measures of central tendency

CO 3: Able to understand measures of dispersion

CO 4: Able to understand the concept of correlation

CO 5: Able to know the statistical methods

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**V**	ECOT51	Economic Development & Indian Economy

CO 1: Able to acquire knowledge about the Agriculture sector in India

CO 2: Able to acquire knowledge about the Industrial sector in India

CO 3: Able to acquire knowledge about the Service sector in India

CO 4: Able to know about Planning and disinvestment process in India

CO 5: Able to acquire comprehensive knowledge about the Andhra Pradesh Economy

At the end of the course student will

CO 1:understand Economic growth and development Measurements and Obstacles of Economic development.

CO 2: learn different growth models like Harrod –Domar, Bigpush etc

CO 3: find different theories of Economic development like Adam smith, Karlmarks, Rostow etc.

CO 4: acquire knowledge of different Features of Indian Economy Poverty, Population, Unemployment, Inequalities.

CO 5: analyze Economic Reforms (LPG) Liberalization, Privatization, Globalization.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**V**	ECOT52	Indian & Andhra Pradesh Economy

At the end of the course student will

CO 1: acquire knowledge of the Agriculture sector in India Agricultural Productivity, Rural credit.

CO 2: learn about the Industrial sector in India, Industrial Policies, Importance of Small-Scale Industry.

CO 3: acquaint with the Service sector in India.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	ECO TEL62	Agricultural Economics

CO 4: be able to know about Planning and disinvestment process in India.

CO 5: have comprehensive knowledge of the Andhra Pradesh Economy. **At the end of the course student will**

CO 1: understand Nature and Scope of Agricultural Economics, Affecting agricultural development.

CO 2: find different Production function.

CO 3: identify Growth Productivity trends in Indian Agriculture, Agricultural reforms.

CO 4: learn systems of Farming, farm size and productivity relationship in Indian Agriculture,

New Agricultural Strategy and Green revolution.

CO 5: understand the emerging trends in production, processing, Marketing and exports.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	ECO TCL61	Agribusiness Environment in Andhra Pradesh

At the end of the course student will

CO 1: understand the role of Agricultural development, Economy wide effects of Backward and forward linkages.

CO 2: identify role of finance and importance of Agricultural credit.

CO 3: know about Production, Processing, Exports trends.

CO 4: Learn about growth and performances of Agricultural commodities.

CO 5: find Market structures and Regulated Markets.

DEPARTMENT OF POLITICAL SCIENCE

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**I**	POL T11B	Introduction to Political Science

At the end of the course student will

CO1: Define important field-specific theories and concepts, and understand their role in developing political science Knowledge: L-1 , L-2

CO2: Summarize conceptual arguments or theoretical approaches. L-3 , L-4

CO3: Apply them to field relevant situations and support their application with appropriate evidence. L-3, L-4

CO4: Compare and evaluate the merits of multiple policies, theories or concepts from different disciplinary perceptions. L-5

CO5: With the course, students are expected to learn the political concepts and theory in the Basic Concepts of Political Science. L-1, L-2

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**II**	POLT21B	Basic organs of the Government

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1. To demonstrate and describe the salient features of the constitution of India interpret, integrate the salient and critically analyse the political economy of Indian Constitution.L1-L2

CO2. To understand the historical growth of the idea of fundamental human rights and create an awareness on directive principles of state policy.L1-L5

CO3.Acquaint themselves with different theories of origin of State.L2

CO4. To define federation and its features in Indian constitution and how it divides power between union and state governments, legislations, administrative and financial spheres and recommendations of Sarkaria Commission.L1-L2

CO5. To learn the contents of Indian constitution and how the supreme court and other court functions and develop an awareness foreign and state constitutions.L5

Program	Semester	Course Code	Course Name

B.A(H.E.P)	**III**	POL T31	Indian Government and politics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: The students community has acquired knowledge of the making of the Indian Constitution and its philosophical background. L1

CO2: Information about the functionaries of the government both at the union and state level was acquainted by the student community.L1, L2

CO3.To Understand the legislative procedures which ensure the orderly conduct of business in our parliament and state legislative assemblies in India.

CO4: To understand know the Ministers, their role &responsibilities.L1,

CO5: To understand Judiciary of India.L1, L2

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**IV**	POL T32	Western political thought

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: It helps students discover the political philosophy that forms the basis of politics in the Western world, to interpret the political philosophies of the Greek, Roman , French, English and Germen philosophers in historical context as well as relate them to contemporary politics.

CO2: Origin of the knowledge in political thought.

CO3: To understand the political thoughts in medieval period and how it laid foundation to modern.

CO4: To demonstrate how government politics people by democracy and individual people.

CO5: To demonstrate individual freedom, surplus value, materialist.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**V**	POLT41	Indian Political Process

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: To demonstrate Legislative procedures which ensure the orderly conduct of business in our Parliament and state legislative assemblies in India.

CO2: To understand the election commission and functions.

Co3: To study the local government administration.

Co4: To understand the awareness of financial and government commissions

Co5: To understand the dynamics of Indian political system and awareness of voting importance in the society.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**V**	POLT51	Indian Political Thought

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: analyse what is Political Science and explain the approaches to the study of Political Science.

CO 2: learn the Contribution of Indian thinkers and its relative importance.

CO 3: have good information about the gradual and steady development of Indian Political Thought.

CO 4: understand the variations in different concepts of Indian political Thought.

CO 5: know paradoxical nature of Indian Political Thought.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**V**	POL T52	Western Political Thought

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand theories of Plato and Aristotle and develop a clear political thought.

CO 2: learn the political thoughts in medieval period and how it laid foundations to modern.

CO 3: know the nature of humans, their rights and social institutions according to key thinkers of political thought.

CO 4: find out how government politics influence people democracy and individual liberty.

CO 5: acquire knowledge of individual freedom, surplus value materialist corruption of history, state alienation and give clear idea about civil society.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	POL TEL61	Principal of Public Administration

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn the nature and scope of Public Administration and difference between public and private levels of administration.

CO 2: find different administrative theories and its significance.

CO 3: acquire knowledge of hierarchy of organization and how to develop co-ordination in an organization and how correct decisions are made.

CO 4: understand the definition of executive, types of executives and different departments and their functions in an organization.

CO 5: know the meaning of motivation and to explain different theories proposed by key thinkers of political science based on motivation.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	POL TCLS62	International Relations

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn a systematic knowledge of the key concepts, theories, approaches and major issues of contemporary International Relations.

CO 2: know scope and subject matter of International Relations as an autonomous academic discipline.

CO 3: understand India‟s Foreign Policy and its engagement with its neighbouring Nations and rest of the world.

CO 4: be able to the issues of Underdevelopment, Terrorism, Regionalism and Integration that characterizes the Post Second World War order.

CO 5: be able to describe the Cold War phases and understand the post Cold era.

CO 6: evaluate the working of UN and its origins, Peace keeping Function and Human Rights.

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	POL TCL61	Local Self Government In Andhra Pradesh

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn about Local Self Governments that look after the administration of an area or a small community such as a village, a town or a city.

CO 2: get knowledge of the principles and practices of local governments among organization, their officials and elected members**.**

CO 3: Strengthen and improve local governance institutions through capacity building by organizing training courses and programs. It works at the grass-root level, close to the people and touch their

everyday life.

CO 4: Local Self Government is the management of local affairs by local bodies elected by the local people**.**

Program	Semester	Course Code	Course Name
B.A(H.E.P)	**VI**	POL TCLS63	Comparative Constitutions of UK and USA

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: get knowledge of different countries and can make a comparative study with native Constitution C**O2:** understand the objectives of major world constitutions the dynamics of actual comparative study with the native Constitution, Politics and policy making in these countries.

CO 3: explore the Constitution of UK, salient features, the executive-the Crown, cabinet, the legislature, House of Lords, House Commons, speak Main Committees, Party System in UK.

CO 4: learn about the US Constitution, salient features, the executive Legislature, Senate, House of Representative, Speaker, Judiciary and role of the Supreme Court, Bill of Rights and Party System.

CO 5: make a comparative analysis of the following institutions of UK Legislature, Executive and party systems.

DEPARTMENT OF MATHEMATICS

Program	Semester	Course Code	Course Name
B.Sc., MPC, MPCS, MSCS, MECS, MCCS, MSCA	**I**	MAT T11A	Differential Equations

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: identify, analyse and learn physical situations which can be described by ordinary differential equations.

CO 2: acquire knowledge to find general solution of first order, second order and higher order homogeneous and non-homogeneous differential equations by manual and technology – based methods.

CO 3: identify a general method for constructing solutions to non-homogeneous linear constant coefficient's second order equations.

CO 4: analyze a variety of differential equations analytically and numerically.

CO 5: develop skill to formulate models of natural phenomena using differential Equations.

Program	Semester	Course Code	Course Name
B.Sc., MPC, MPCS, MSCS, MECS, MCCS, MSCA	**II**	MAT T29	Real Analysis

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be able to gain knowledge and concepts of modern analysis**.**

CO 2: develop a higher level of mathematical knowledge combined with the ability to think analytically.

CO 3: learn to follow more advanced treatments of Real analysis and study its applications.

CO 4: be able to write simple proofs on their own and study rigorous proofs.

CO 5: be able to demonstrate the ability to integrate knowledge and ideas of differentiation and integrations in coherent and meaningful manner and use appropriate techniques for solving related problems and establishing theoretical results.

Program	Semester	Course Code	Course Name
B.Sc., MPC, MPCS, MSCS, MECS, MCCS, MSCA	**III**	MAT T31	Abstract Algebra

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be able to study the properties of sets, and check whether the given set are groups or not and study various theorems which can be applied to study various algebraic structures.

CO 2: learn certain necessary and sufficient conditions for a non-empty subset of a group to become a subgroup and develop skills in solving problems in groups which facilitate, solving of problems in Cosets.

CO 3: be able to advance their ability to apply the necessary and sufficient conditions studied, to solve the problems in Normal Subgroups and learn the concept of Quotient group.

CO 4: learn fundamental theorem of Homomorphism, and will be able to deduce other

homomorphism theorems and also learn the concept of automorphisms and related theorems.

CO 5: be able to understand the concepts of permutation groups, cyclic groups, finding the number of generators of a cyclic group.

Program	Semester	Course Code	Course Name
B.Sc., MPC, MPCS, MSCS, MECS, MCCS, MSCA	**IV**	MAT T02	THREE DIMENSIONAL ANALYTICAL SOLID GEOMETRY

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire basic knowledge to understand the idea of differentiation using the limit concept.

CO 2: develop skill to find maxima, minima of a function. Understand the consequences of Rolle‟s theorem and the mean value theorem for differentiable functions.

CO 3: evaluate the integrals of functions &Vector fields over parametrized surfaces and compute them in simple examples**.**

CO 4: use the skill in recognizing the statements of stokes theorem &Divergence theorem.

CO 5: be learn applications of these integral theorems in physical and mechanical engineering.

Program	Semester	Course Code	Course Name
B.Sc., MPC, MPCS, MSCS, MECS, MCCS, MSCA	**IV**	MAT T41A	Linear Algebra

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be able to gain proficiency in solving systems of Linear equations using matrices and demonstrate a working knowledge of algebraic properties of matrices.

CO 2: be able to understand Euclidean Vector spaces, their inherent and algebraic structure and the accompanying geometry.

CO 3: be able to acquire facility working with general vector spaces, linear transformations coordinate vectors and the changing of bases.

CO 4: be able to develop an algebraic and geometric understanding of eigenvalues and eigenvectors

and eigenspaces.

CO 5: be able to use mathematical software and calculators to solve a variety of applications in Physical science, Computer science or Economics.

Program	Semester	Course Code	Course Name
MPC, MPCS, MSCS, MECS, MCCS, MSCA	**V**	MAT T51	Ring Theory and Vector Calculus

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire basic knowledge in define and recognize the mathematical logic, the mathematical induction, the function and sets concepts of the relations and its properties of the group theory.

CO 2: develop skills to analyse, improve and outline the logical thinking. Interpret how to know the ring theory using the internet.

CO 3: develop skills in designing mathematical models to illustrate, how to search the internet and use software programs to deal with problems.

CO 4: develop numerical skills in solving the problems involving Evaluate line integrals solve line and surface integrals. Evaluate double and triple integrals in Euclidean, cylindrical and spherical coordinate systems.

CO 5: use relevant numerical techniques to determine, and apply, the important quantities associated with vector fields such as the divergence, curl, and scalar potential. Evaluate integrals using Green's theorem and Stoke's theorem.

Program	Semester	Course Code	Course Name
B.Sc. (MPC, MPCS, MSCS, MECS, MSCA)	**V**	MAT T52	Linear Algebra

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be able to gain proficiency in solving systems of Linear equations using matrices and demonstrate a working knowledge of algebraic properties of matrices.

CO 2: be able to understand Euclidean Vector spaces, their inherent and algebraic structure and the accompanying geometry.

CO 3: be able to acquire facility working with general vector spaces, linear transformations coordinate vectors and the changing of bases.

CO 4: be able to develop an algebraic and geometric understanding of eigenvalues and eigenvectors and eigenspaces.

CO 5: be able to use mathematical software and calculators to solve a variety of applications in Physical science, Computer science or Economics.

Program	Semester	Course Code	Course Name
B.Sc. (MPC, MPCS, MSCS, MECS, MSCA)	**VI**	MAT TEL61	Numerical Analysis

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire basic knowledge in solving interpolation with equal interval problems by various numerical methods. Estimate the missing data through interpolation methods.

CO 2: develop skills in analysing the methods of interpolating a given data, properties of interpolation with unequal intervals and derive conclusions. approximate a function using an appropriate numerical method.

CO 3: implement numerical methods for a variety of multidisciplinary applications and a variety of numerical algorithms using appropriate technology.

CO 4: use relevant numerical techniques for inverse interpolation and code a numerical method in a modern computer language.

CO 5: use relevant numerical techniques for develop numerical skills in solving the problems involving algebraic and transcendental equations.

Program	Semester	Course Code	Course Name
B.Sc., MPC, MPCS, MSCS, MECS, MSCA	**VI**	MAT TCL 64	Cluster – B, Paper - I Discrete Mathematics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be able to develop basic knowledge of sets, operations and functions and solving the problems, writing the arguments using logical notations and determine whether the logical inferences are valid or not.

CO 2: learn to solve counting problems by applying elementary counting techniques using the sum and product rules, Permutations and Combinations, Pigeonhole Principle and binomial and multinomial theorems.

CO 3: be able to interpret various kinds of proofs and solve the problems using Principle of

Mathematical Induction and Principle of Inclusion and exclusion.

CO 4: be able to find coefficients of generating functions and solve recurrence relations using Substitution, Generating functions, Characteristic roots methods.

CO 5: evaluate Boolean Functions and simplify the expressions applying the properties of Boolean Algebra and minimizing the number of logical gates and circuits.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc., MPC, MPCS, MSCS, MECS, MSCA	**VI**	MAT TCL 65	Cluster – B, Paper – II Graph Theory

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire basic knowledge of solve problems using basic graph theory.

CO 2: develop skills in analysing and determining whether graphs are Hamiltonian and/or Eulerian.

CO 3: solve problems involving vertex and edge connectivity and solve real world problems using graph theory.

CO 4: be able to reproduce the proofs of some fundamental statements on graphs.

CO 5: be able to solve new graph problems.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc., MPC, MPCS, MSCS, MECS, MSCA	**VI**	MAT TCL 66	Cluster – B, Paper - III Special Functions

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire basic knowledge in Integral Definition of Gamma and Beta Functions. Properties of Gamma and Beta Functions. Relations Between Gamma and Beta Functions. Generalization of the factorial by Means of the Gamma function and Gamma Function for Negative Values of Argument.

CO 2: develop skills in analysing the Properties of Bessel Functions of the First Kind: Differentiation, Recurrence relationships, Generating functions, Bessel‟s Equation and its Solutions**.**

CO 3: develop skills in designing mathematical models for Legendre‟s Polynomials, the Generating

Function for Legendre‟s Polynomials, Orthogonally of Legendre‟s Polynomials, Legendre‟s Equation and its solutions.

CO 4: develop numerical skills in solving the problems involving Laguerre equation and its solution. Learn Properties of Laguerre polynomials and Rodriguez‟s formula, Orthogonality of Laguerre polynomial**.**

CO 5: use relevant numerical techniques for Integrals involving Hermite Polynomial, Hermite „s equation and its solution

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MPC, MPCS, MSCS, MECS, MSCA)	**VI**	MAT TCLS67	Cluster – A, Paper - I Laplace Transforms

At the end of the course student will

CO 1: find the Laplace transform of a function by definition and by use of table.

CO 2: recognise the inverse Laplace transform of a function.

CO 3: able to write piece wise functions using the unit step function.

CO 4: find transforms using the first and second translation theorems.

CO 5: solve linear Differential equations with constant coefficients and unit step input functions using the Laplace transforms.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MPC, MPCS, MSCS, MECS, MSCA)	**VI**	**MAT TCLS69**	Cluster – A, Paper - II Advanced Numerical Analysis

At the end of the course student will

CO 1: be able to derive numerical methods for various mathematical operations

and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.

CO 2: have the ability to compare the computational methods and choose the appropriate computational method among various existing methods for solving the given problems

CO 3: analyse various errors obtained in the numerical solution of problems.

CO 4: demonstrate the importance of selecting the right numerical technique for a particular

application, and carefully analysing and interpreting the results obtained.

Program	Semester	Course Code	Course Name
B.Sc. (MPC, MPCS, MSCS, MECS, MSCA)	**VI**	MAT TCLS68	Cluster – A, Paper - III Fourier series and Fourier transforms

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: represent continuous time periodic signals using Fourier series

CO 2: understand the properties of Fourier series

CO 3: write given function in terms of sine and cosine terms in Fourier series and also to get knowledge in Fourier transforms

CO 4: use z-transform in the characterization of linear time invariant system

CO 5: understand the relationship between Fourier series and linear time in variant system.

DEPARTMENT OF MATHEMATICS (B.Sc.Honors)

Program	Semester	Course Code	Course Name
B.Sc. (Honors)	**I**	MAT T13	Sequences, Series, Limits and Continuity

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge to demonstrate and understand limits & how they are used in sequences, series, differentiation and integration.

CO 2: analyse and apply the convergence and divergence test to determine the convergence and divergence of an infinite series.

CO 3: apply skill to verify the value of the limit of a function at a point using the definition of the limit and continuity**.**

CO 4: the consequences of the intermediate value theorem for continuous functions.

CO 5: appraise to follow more advanced treatments of Real analysis and study its applications.

Program	Semester	Course Code	Course Name
B.Sc. (Honors)	**II**	MAT T25	Differentiation, Riemann Integration, Vector Differentiation &Integration

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire basic knowledge to understand the idea of differentiation using the limit concept.

CO 2: develop skill to find maxima, minima of a function. Understand the consequences of Rolle‟s theorem and the mean value theorem for differentiable functions.

CO 3: evaluate the integrals of functions &Vector fields over parametrized surfaces and compute them in simple examples**.**

CO 4: use the skill in recognizing the statements of stokes theorem &Divergence theorem.

CO 5: be learn applications of these integral theorems in physical and mechanical engineering.

Program	Sem ester	Course Code	Course Name
B.Sc. (Honors)	**III**	MAT T33	Discrete Mathematics- I

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: gain knowledge in the basic principles and operations in Set theory, Functions and Relations.

CO 2: use their skills for applying logic and check whether the logical compound statements are valid or not.

CO 3: be capable of applying the knowledge gained to solve real world Problems**.**

CO 4: analyze skills in critical thinking and apply Boolean Algebra to circuits and gate networks.

CO 5: be able to apply the ability of basic counting techniques to solve combinatorial Problems.

Program	Seme ster	Course Code	Course Name
B.Sc. (Honors)	**IV**	MAT T43	Discrete Mathematics- II

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge in the basic principles and operations in Set theory, Functions and Relations.

CO 2: successfully apply knowledge gained through project experience

CO 3: analyze knowledge gained to solve real world problems.

CO 4: understand how to apply tools and ideas from mathematics and Theoretical computer science to structure & solve complex problems.

CO 5: appraise the work effectively both individually, as members of team and able to manage their own career development & advancement.

DEPARTMENT OF PHYSICS

Mechanics, Waves and oscillations

Program	Semester	Year	Course Code	Course Name
MPC	**I**	**2020 - 2021**	PHYT11B	**Mechanics, Waves and oscillations**

COURSE OUTCOMES:

At the end of the course the student will be able to

- To Analyze the essential mathematical skills needed for describing mechanics and special relativity. Study the behavior of rigid body dynamics
- To understand the laws of motion under a gravitational force
- Understand the negative result of Michelson Morley experiment, Gallieon and Lorentz transformation
- Be able to derive the velocity and acceleration of SHM and the kinetic, potential and total energy of a mechanical system undergoing SHM. Understand the concept of coupled oscillators, be able to derive and solve the equations of motion for simple systems and describe motion of coupled oscillators in terms of normal mode solutions
- Understand a wave as a travelling oscillation; understand the concepts of, and the differences between, transverse and longitudinal waves; know the non-dispersive wave equation and be able to derive it for transverse waves on a string; understand superposition of waves, wave groups and harmonic wavesTo describe various methods of producing ultrasonics and to synthesise Nano composite materials with the aid of ultrasonic balls using the principles of ultrasonic grating

Wave Optics

Program	Semester	Year	Course Code	Course Name
MPC	**II**	**2020 - 2021**	PHYT21C	**Wave Optics**

COURSE OUTCOMES:

At the end of the course the student will be able to

- To Evaluate the optical principles of thick lenses and optical aberrations
- To Apply the principles of wave motion and superposition to explain the physics of polarization, interference and diffraction in daily life.
- To Solve problems in optics by selecting the appropriate equations and performing numerical or analytical calculations.
- To perform laboratory experiments in optics and document their results, using correct procedures and protocols
- To Understand nonlinear optics and operation of a laser.

Program	Semester	Course Code	Course Name
B.Sc (MPC & MPCS)	**III**	PHY T31A	HEAT AND THERMO DYNAMICS

COURSE OUTCOMES:

CO1 State the First Law and define heat, work, thermal efficiency and the difference between various forms of energy and describe energy exchange processes, reversible and irreversible process.

CO2 Understand the microscopic behavior of molecules, interactions and the concepts of transport phenomena of heat transfer, mass transfer and momentum transfer.

CO3 use kinetic theory of gases to derive expressions for pressure of an ideal gas, heat capacities of solids and gases and transport properties

CO4 Understand very low temperatures like the concept of Joule Thomson effect, Liquefaction of gases and the properties at very low temperatures.

CO5 Ability to evaluate entropy changes in a wide range of processes and determine the reversibility or irreversibility of a process from such calculations. Examine the nature of black body radiations and the basic theories.

Program	Semester	Course Code	Course Name
B.Sc (MPC & MPCS)	**IV**	PHY T41A	**Electricity, Magnetism and Electronics**

Course Outcomes:

1. To evaluate electric field & how gauss flux theorem relating the distribution of electric charges to the resulting electric field.
2. Numerous applications of faraday's laws of electromagnetic induction.
3.To Acquire knowledge regarding conservation of energy of an electromagnetic wave.
4. Explain the basic concepts of semiconductor diodes, transistors and can explain various current components, design and analyse different basic circuits and how it is applicable in producing low & high power packages.
5.Able to explain the different no systems and solve examples and also able to analyze and design different adder circuit

Program	Semester	Course Code	Course Name
B.Sc(MPCS)	**V**	PHYT01	MODERN PHYSICS

Course outcomes:
On successful completion of this course, the students will be able to:

CO1 Remember the different atomic models and basic knowledge of spectroscopy

CO2 Understand the theory and application of microwave, infrared and Raman spectroscopy

CO3 Apply non- relativistic Schrödinger wave mechanics to a variety of potentials in one and three dimensions.

CO4 Analyse the prerequisite in a molecule towards its Rotational and vibrational activity

CO5 Examine the basic properties of nuclei, characteristics of Nuclear forces, salient features of particle physics.

Program	Semester	Course Code	Course Name
B.Sc(MPCS)	**V**	PHYT51	Electricity, Magnetism & Electronics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: evaluate electric field & how gauss flux theorems relate the distribution of electric charges to the resulting electric field.

CO 2: numerous applications of Faraday's laws of electromagnetic induction.

CO 3: acquire knowledge of conservation of energy of an electromagnetic wave.

CO 4: explain the basic concepts of semiconductor diodes, transistors and various current components, design and analyse different basic circuits and how it is applicable in producing low & high-power packages.

CO 5: able to explain the different systems and solve examples and also able to analyse and design different adder circuit.

Program	Semester	Course Code	Course Name
B.Sc. (MPC & MPCS)	**V**	PHYT52	Modern Physics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand the basic principles of 20th-century Physics including but not limited to Einstein theory of Relativity, Quantum theory of light, Particle nature of matter, Quantum mechanics in one dimension, basic ideas of nuclear physics and its applications.

CO 2: develop a comprehension of the current basis of broad knowledge in Modern physics.

CO 3: know about the problems confronting modern physics in the 21st century.

CO 4: develop a critical thinking, analytical reasoning, and problem-solving skills.

CO 5: know how to use interactive methods and Internet for their independent learning on “Introduction

to Modern physics.

Program	Semester	Course Code	Course Name
B.Sc(MPC & MPCS)	V I	PHY TEL62	Materials Science

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand how to distinguish different classes of engineering materials, processing & properties and development of new applications.

.**CO 2:** acquaint with the consequences of crystal defects on behaviour of materials engineering properties: toughness, strength, ductility & stiffness.

CO 3: develop lifelong learning skills to enhance knowledge.

CO 4: study various concepts of electrical properties like insulation, temperature dependency, permittivity and dielectric strength for industrial materials in electrical devices like capacitor and transformer cables.

CO 5: acquire the knowledge on application of piezo electric effect & pyro electric effect in crystal gas oscillators, transducers, filters, microphones, lighters, car ignition & infrared detectors.

ogram	Semester	Course Code	Course Name
B.Sc (MPC & MPCS)	V I	PHY TELS63	Analog and Digital Electronics

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: identify the relevant information to supplement the Analog electrical circuit

CO 2: practice different types of wiring and instrument connections

CO 3: develop the ability to analyze and design analog electrical circuits using discreet Components.

CO4: Analyze, design and implement sequential logic circuit.

CO5: Evaluate frequency response to understand behaviour of Electronic Circuits.

Program	Semester	Course Code	Course Name
B.Sc. (MPC & MPCS)	VI	PHY TCL64	Fundamental Of Nano Science

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be able to acquire knowledge of the importance of size dependent Phenomenon.

CO 2: Analyze the difference between top down and bottom up techniques for nanomaterial fabrication. **CO 3:** be able to apply Nano technology in bio- medical field, optical field and in microelectronic field. **CO 4:** identify different types of polymers and their applications in various fields

CO 5: have the opportunity to gain knowledge about the practical skills in synthesis and characterization of nanostructured materials.

Program	Sem ester	Course Code	Course Name
B.Sc(MPC & MPCS)	**VI**	PHY TCL65	Renewable Energy

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn the environmental aspects of non-conventional energy resources in comparison with various conventional energy systems, their prospects and limitations**.**

CO 2: know the need of renewable energy resources and its historical and latest developments.

CO 3: learn to use solar energy and various components used in the energy production and their applications like -heating, cooling, desalination, power generation, drying cooking etc.

CO 4: acquire the knowledge of fuel cells, wave power, tidal power and geothermal principles and applications.

CO 5: appreciate the need of Wind Energy and various components used in energy generation and learn classifications.

CO 6: compare Solar, Wind energy systems, their prospects, advantages and limitations.

Program	Semester	Course Code	Course Name
B.Sc(MPC & MPCS)	**VI**	PHY TCL62	Computational Methods & Programming

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: understand common numerical methods and how they are used to obtain approximate solutions to otherwise intractable mathematical problems.

CO 2: apply C programs that use pointers to access arrays, strings & functions.

CO 3: understand C programs using pointers to allocate memory using dynamic memory Management functions.

CO 4: analyse files concept to show input & output of files in C.

CO 5: analyse and evaluate the accuracy of common numerical methods.

Program	Semester	Course Code	Course Name
B.Sc. (MPC & MPCS)	**VI**	**PHY TCLS67**	Electronics Instrumentation

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: develop an understanding of construction and working of different measuring instruments.

CO 2: able to use Digital voltmeter, to measure frequency and phase with oscilloscope.

CO 3: understand the basic analog and digital meters for measurements of various electrical parameters.

CO 4: understand the basic principle of transducers and their construction, working principle, classification and applications in various fields.

CO 5: learn the basic test instruments such as power supply, function generator, CRO and their construction and working principle.

Program	Semester	Course Code	Course Name
B.Sc. (MPC & MPCS)	**VI**	**PHY TCLS66**	Introduction to Microprocessors and Microcontrollers.

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: learn the architecture of 8085, 8051, 8086.

CO 2: illustrate the organization of registers and memory in Microprocessors

CO 3: assess and solve basic binary math operations using the Microprocessors and explain the internal architecture.

CO 4: able to understand the fundamentals of the micro computing environment

CO 5: able to explain the similarities and differences between Microprocessors and Microcontrollers.

DEPARTMENT OF CHEMISTRY

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
BZC, MPC, FMC, MCCS AND AZC	I	CHET 11A	Inorganic &Physical Chemistry

COURSE OUTCOMES:

At the end of the course the student will be able to

At the end of the course, the student will be able to;

CO1. Understand the basic concepts of p-block elements.

CO2. To compare the periodic properties of d and f block elements and explain the bonding and structures of metal carbonyls.

CO3. To understand the properties and structure of Solid state.

CO4. To understand the properties of gaseous and liquid states.

CO5. To explain the properties of Solutions.

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
BZC, MPC, FMC, MCCS AND AZC	II	CHET21 A	ORGANIC & GENERAL CHEMISTRY

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1. Understand and explain the differential behaviour of organic compounds based on fundamental concepts learnt.

CO2. Formulate the mechanism of organic reactions by recalling and correlating the fundamental properties of the reactants involved.

CO3. Learn and identify many organic reaction mechanisms including Free Radical Substitution, Electrophilic Addition and Electrophilic Aromatic Substitution.

CO4. Understand the concepts of absorption and adsorption, colloidal chemistry and nature of Chemical Bonding

CO5. Correlate and describe the stereo chemical properties of organic compounds and reactions.

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
BZC, MPC, FMC, MCCS AND AZC	III	CHET31A	ORGANIC CHEMISTRY AND SPECTROSCOPY

COURSE OUTCOMES:

At the end of the course the student will be able to

At the end of the course, the student will be able to;

1. Understand preparation, properties and reactions of halo alkanes, haloarenes and oxygen containing functional groups.
2. Use the synthetic chemistry learnt in this course to do functional group transformations.
3. To propose possible mechanisms for any relevant reaction
4. Understand the concepts of Rotational Vibrational Electronic and NMR Spectroscopy
5. Able to apply the concepts of spectroscopy to simple organic molecules

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
BZC, MPC, FMC, MCCS AND AZC	IV	CHET01	INORGANIC, ORGANIC AND PHYSICAL CHEMISTRY

COURSE OUTCOMES:

At the end of the course the student will be able to

At the end of the course, the student will be able to;

1. Understand the basic concepts of Organo Metallic compounds.

2. Get the knowledge of carbohydrates and enables the students to synthesise and also apply this knowledge in biological systems in day to day life

3. Understand the classification synthesis and chemical properties of Amino acids

4. Apply the knowledge of both synthetic and natural heterocyclic compounds in pharmaceuticals, agro chemicals and veterinary products

5. Acquire the knowledge of nitro hydrocarbons, nitrogen compounds and to learn fundamentals for higher studies.

6. To understand the concept of quantum efficiency and mechanisms of photochemical reactions.

7. Access the applications of first and second law of thermodynamics and their development and recognise the role played by transition metal complexes, bonding theories and their kinetic studies

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
BZC, MPC, FMC, MCCS AND AZC	IV	CHET41A	INORGANIC AND PHYSICAL CHEMISTRY

COURSE OUTCOMES:

At the end of the course the student will be able to

At the end of the course, the student will be able to;

1. Get the potential to recognise the coordination compounds and to explain the stability of complexes with spectral and magnetic properties

2. Apply the knowledge of various theories and evaluate the concepts in learning coordination chemistry

3. Understand the biological significance of various inorganic metals and their role in daily life.

4. To acquire basic knowledge of Phase rule

5. Apply the principle of electro chemistry to conductance and to provide a basis for Debye huckel theory.

6. Determine the rate and order of reactions based on kinetic information With the knowledge of chemical kinetics

Program	Semester	Course Code	Course Name
B.Sc. (MPC, BZC & FMC)	V	CHE T51	Inorganic, Organic & Physical Chemistry-I

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get the potential to recognise the coordination compounds and to explain the stability of complexes with spectral and magnetic properties.

CO 2: learn the role played by transition metal complexes, bonding theories and their kinetic studies.

CO 3: apply knowledge of various theories and evaluate the concepts in learning coordination Chemistry.

CO 4: evaluate the properties of pure substances thermodynamically and derive the relationships between thermodynamic quantities.

CO 5: access the applications of first and second law of Thermodynamics and its development.

CO 6: recognise the properties of nitro hydrocarbons, nitrogen compounds and able to analyse the given organic compound by adopting the systematic procedure in the laboratory.

Program	Semester	Course Code	Course Name
B.Sc. (MPC, BZC & FMC)	V	CHE T52	Inorganic, Organic &Physical Chemistry-II

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: acquire knowledge of carbohydrates and amino acids and able to synthesise and apply this

knowledge to biological systems in day to day life.

CO 2: apply knowledge of both synthetic and natural heterocyclic compounds in Pharmaceuticals, Agro chemicals and Veterinary products**.**

CO 3: determine the rate and order of reactions based on kinetic information with the knowledge of chemical kinetics**.**

CO 4: learn the basic principles of Photochemical process which help in the development of sustainable source of energy.

CO 5: synthesize new complex compounds and explain the biological significance of various inorganic metals and their role in daily life.

CO 6: measure the Surface Tension, Viscosity, Partition coefficient and kinetics of various samples given.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MPC, BZC & FMC)	**VI**	CHE TEL61	Elective - I Analytical Methods in Chemistry

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Have of both theoretical and practical knowledge in analytical Chemistry.

CO 2: Evaluate analytical separation methods which are helpful for higher learning and research.

CO 3: Apply knowledge to work in R&D and pharmaceutical laboratories**.**

CO 4: Identify the different reagents and solvents used in various separation techniques like solvent extraction, Ion exchange and Chromatography.

CO 5: learn to the analysis with accuracy in Chemical, Cosmetic, Textile, Petro- chemical, Agro, food, Agriculture, Electrical power, Aqua, Pharmaceutical and Aerospace industries and laboratories**.**

CO 6: be able to Demonstrate analytical skills required for the detection, separation and estimation of different categories of states of matter and able to do volumetric analysis in the laboratory.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MPC, BZC & FMC)	**VI**	**CHE TCLS68**	Elective – II Environmental Chemistry

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: get the overview of Environmental Chemistry including segment of environment and to know the resources of Hydrological cycle.

CO 2: have to knowledge of the sources of air pollution and its controlling methods.

CO 3: understand the water quality parameters and industrial waste water treatment.

CO 4: acquire knowledge of the conversion of temporary and permanent hard water into soft water and also know the ill affects of toxic chemicals and pesticide

CO 5: understand the functions and types of Eco system and Bio diversity and distribution of Biodiversity and its trends.

CO 6: determine hardness, acidity, alkalinity and chlorides present in the various water samples.

Program	Semester	Course Code	Course Name
B.Sc. (MPC, BZC& FMC)	**VI**	CHE TCLS69	Elective - III Green Chemistry

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: know the basic principles of Green Chemistry and its Green synthesis including rearrangements, addition and different organic reactions and apparatus required.

CO 2: get knowledge of the selection of solvent, aqueous phase reactions and preparation, properties and applications of super critical Co_2

CO 3: identify the apparatus required and advantages, disadvantages of microwave and ultra sound assisted green synthesis.

CO 4: know the heterogeneous catalysis and its applications in the use of zeolites, silica, alumina etc during green synthesis.

CO 5: acquire knowledge of green synthesis of certain chemical compounds and understand the microwave assisted reactions in water and in organic solvents and also ultra sound assisted green reactions.

CO 6: understand the concept of ester hydrolysis, partition coefficient, surface tension and viscosity in the laboratory.

Program	Semester	Course Code	Course Name

B.Sc. (MPC, BZC& FMC)	VI	CHE TCL67	Cluster – 1II Pharmaceutical and Medicinal Chemistry

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: be able to demonstrate skills required for employment in the pharmaceutical industries and know the importance of Medicinal Chemistry in development and applications of therapeutic drugs.

CO 2: understand of physio chemical properties and classification of drugs and apply knowledge in the synthesis of various types of drugs.

CO 3: Evaluate various routes of administration of drugs and learn to treat the various forms of diseases.

CO 4: obtain knowledge of trade name and generic name of a drug, chemical structures and therapeutic activities of some basic drugs.

CO 5: understand the basic concept involved in HIV-AIDS and its prevention and to know the drugs used to reduce the activity of virus.

CO 6: find the need of using medicines and able to know the difference between drug and medicine. Know the process of preparing certain medicines like aspirin, paracetamol, acetanilide etc. in the laboratory

Program	Semester	Course Code	Course Name
B.Sc. (MPC&BZC)	VI	CHE TCL65	Cluster - I Polymer Chemistry

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Understand the techniques used and the mechanism involved in the preparation of various polymers.

CO 2: Know how the properties of polymeric materials can be exploited and their applications in Polymer industry.

CO 3: Identify the role of repeated units in the formation of Polymer chains and the nature of the polymers formed.

CO 4: Estimate the number average and weight average molecular masses of polymer samples.

CO 5: Know the classification, degree of polymerization and various additives used in polymer industry and apply the knowledge of nature of polymeric materials in technological fields.

CO 6: learn qualitative analysis and understand the concept of Green Chemistry and be able to apply the knowledge in the laboratory.

Program	Semester	Course Code	Course Name
B.Sc. (MPC & BZC)	VI	CHE TCL66	CLUSTER - II Fuel Chemistry and Batteries

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: recognize the rational uses of energy from various energy resources and to characterize the different types of fuels by their calorific values.

CO 2: be able to explain why cracking is carried out in large hydrocarbons and able to describe the process of fractional distillation**.**

CO 3: have potential to distinguish the properties of natural and synthetic lubricants and to understand the technical fluid friction of lubricating oils in industry.

CO 4: gain potential to recognize the working condition of different batteries.

CO 5: evaluate and study the properties and different applications of fuels and batteries used in petrochemical industries.

CO 6: apply knowledge of different working principles of electrodes and batteries and their applications in chemical and other engineering areas and able to do different projects.

Program	Semester	Course Code	Course Name
B.Sc. (MPC&BZC)	**VI**	**CHE TCLS610**	CLUSTER - IV Instrumental Methods of Analysis

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Able to know the spectroscopic methods of analysis including classification of analytical methods and the types of instrumental methods including electromagnetic radiation.

CO 2: understand the concept of Infrared Spectroscopy, interaction with molecule; detection of the signal; interpretation of spectrum and its applications.

CO 3: acquire knowledge of emission, absorption, fluorescence and photo acoustic in the uv visible and near IR region including excitation sources, wave length, dispersion and detection of signal and single and double beam instruments and interpretation.

CO 4: get an over view of separation techniques in Chromatography including gas, liquid and

column. Also acquire knowledge regarding separation based on increasing number of factors detection, as a means of further analysis and DNA analysis.

CO 5: know about the Mass, Atomic and NMR Spectroscopy, Electro analytical methods, Radio chemical methods, X-ray analysis and Electronic Spectroscopy.

CO 6: be able to perform qualitative analysis and understand the concept of Green Chemistry and apply knowledge in the laboratory

Program	Semester	Course Code	Course Name
B.Sc. (MPC&BZC)	VI	**CHE TCLS611**	CLUSTER - V Analysis of Drugs, Foods, Dairy products and biochemical Analysis

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Analyse analgesics, anti-piratic, anti-malarial, anti-histamine drugs and sedatives and their pharmaceutical preparations.

CO 2: Analyse anti-epileptic, anti-convulsant, cardiovascular, diuretics and peracids.

CO 3: Know the analysis of milk and milk products and chemicals used in preservatives, colouring matters, flavouring agents.

CO 4: Identify the adulterants used in rice and wheat; tea and coffee powders; coconut oil and milk.

CO 5: Know the clinical analysis of blood including its composition, trace elements and to estimate the blood cholesterol, glucose, enzyme, RBC, WBC etc

CO 6: Do small investigations which are useful in minor and major research projects.

Program	Semester	Course Code	Course Name
B.Sc. (MPC & BZC)	VI	**CHE TCLS612**	Cluster - VI Inorganic Materials of Industrial Importance

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Communicate periodicity in s and p block elements related to fundamental group properties.

CO 2: Explore new areas of research silicate industry and allied fields of Science and Technology.

CO 3: Identify and manufacture different types of fertilizers and carry out scientific experiments.

CO 4: Understand and design surface coatings and analyse the result of such experiments.

CO 5: explore knowledge of alloys and explosives in Chemistry and Technology.

CO 6: Know the concept of Volumetric Analysis and Green Chemistry and also able to apply knowledge in the laboratory

Program	Semester	Course Code	Course Name
B.Sc. (MPC & BZC)	VI	CHE TCLS613	Cluster - VII Analysis of Applied Industrial Products

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Have the fundamental knowledge and able to analyse soaps and paints.

CO 2: Design and carry out scientific experiments and analyse the results of such experiments in the area of industrial solvents and different oils.

CO 3: Explore new areas of research and analysis regarding fertilizers.

CO 4: Learn the analysis of gas and different fuel gases which is the need of the hour.

CO 5: Understand the analysis of complex materials such as cement and glasses.

CO 6: Do small investigations which are useful to pursue minor and major research projects.

Program	Semester	Course Code	Course Name
B.Sc. (MPC&BZC)	VI	**CHE TCLS614**	Cluster - VIII Organic Spectroscopic Techniques

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Learn the basic principles of Nuclear Magnetic Resonance Spectroscopy and its relevant terms.

CO 2: Interpret the basic principles of Spectroscopy in various fields.

CO 3: Know the principles, quantum mechanical methods, spin-spin interactions and its advantages.

CO 4: Find electronic spectra of diatomic molecules and types of transitions.

CO 5: Understand electronic spectra of polyatomic molecules, chemical analysis by Electronic Spectroscopy, ESR (electron spin resonance spectroscopy), simulations and applications.

CO 6: Know the process of preparing certain medicines in the laboratory.

Program	Semester	Course Code	Course Name
B.Sc. (MPC&BZC)	**VI**	**CHE TCLS615**	Cluster - IX Advanced Organic Reactions

COURSE OUTCOMES:

At the end of the course the student will be able to

CO 1: Interpret the concept of Organic Photochemistry and photochemical reactions.

CO 2: Understand and associate different organic photochemical reactions will be able to derive the mechanism of a reaction.

CO 3: Evaluate and illustrate the principles of protecting groups and applies knowledge in Organic Chemistry.

CO 4: Demonstrate and express the new methods of organic reactions and their applications.

CO 5: Relate the new synthetic organic reactions in the area of research and design new strategies for study.

CO 6: Apply knowledge of Volumetric and Green Chemistry in the laboratory.

DEPARTMENT OF COMPUTER SCIENCE

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**I**	CSCT11B	Problem Solving in C

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1. Understand the evolution & functionality of Digital Computers and develop an algorithm for solving a given problem.

CO2. Understand tokens and control structures in C.

CO3. Understand arrays and strings and implement them.

CO4. Understand the right way of using functions, pointers, structures and unions in C

CO5. Develop and test programs written in C files

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**II**	CSC T21B	Data Structures

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1. Learn the concepts of ADT and understand analysis of algorithms

CO2. Understand available Data Structures for data storage and processing and Develop ability to implement different Searching.

CO3. Learn stacks, queues and their applications

CO4. Understand trees, graphs and implement their operations

CO5. Develop ability to implement different Sorting

Program	Semester	Course Code	Course Name
B.Sc.(MPCS, MECS, MSCA, MSCS, MCCS)	**III**	CSC T01	Object Oriented Programming using Java

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Understand the concept and underlying principles of Object-Oriented Programming, Understand how object-oriented
concepts are incorporated into the Java programming language. (PO5, PO7).

CO2: Implement Object Oriented Programming Concepts (class, constructor, overloading, inheritance, overriding) in java. (PO5,
PO7).

CO3: Analyse inheritance and interfaces in a Java program (PO5, PO7).

CO4: Evaluate Multithreading, exception handling in Java. (PO5, PO7).

CO5: Create applets and packages in a Java program, Use of Input/output Streams in java and use of JDBC with Oracle database. (PO5, PO7).

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**III**	CSCT34B	DATABASE MANAGEMENT SYSTEMS

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Gain the Knowledge on Database, DBMS and analyse the difference between file- based system and DBMS.(PO5, PO7)

CO2: Model Database using ER and EER diagrams and design database schemas based on that model.(PO5, PO7)

CO3: Understanding the fundamental concepts of DBMS with Special emphasis on Relational Model, understanding Normalization and applying it to
normalization of database. (PO5, PO7)

CO4: Create a small database using SQL COMMANDS, store and Retrieve data from the database. (PO5, PO7).

CO5: Understanding PL/SQL and various operations in PL/SQL (PO5, PO7).

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**IV**	CSCT41C	OPERATING SYSTEMS

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand Operating System Architectural design and its services. (PO1, PO3)
2. Implementation of Scheduling Algorithms. (PO2, PO4)
3. Analyze memory management techniques, concepts of virtual memory and disk scheduling. (PO2, PO3)
4. Understand the implementation of file systems and directories with the interfacing of IO devices with the operating system.
(PO1, PO5)
5. Identify the deadlock situation and provide appropriate solutions so that protection and security of the operating system is also maintained. (PO1, PO3, PO4)

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**V**	CSC T51	Software Engineering

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: explore to develop and maintain and evaluate large-scale software systems.

CO 2: organize to gather, analyse and specify requirements of the software projects. **CO 3:** analyse to work as an effective member or leader of software engineering teams.

CO 4: acquire Knowledge to produce efficient, reliable, robust and cost-effective software solutions.

CO 5: deliver and Evaluate different testing methodologies.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**V**	CSC T52	Database Management Systems

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate the concepts of database, its characteristics involved in the database and advantages of the DBMS and its architecture.

CO 2: learn the concept of ER- model and EER models.

CO 3: analyse the Functional dependencies and normalization of a database.

CO 4: acknowledge the basic relational algebra, relational calculus operations & QBE.

CO 5: analyse the Structured Query Language (SQL) for database manipulation.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TEL62	Elective – I : Web Technologies

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate interactive web pages using html and style sheets.

CO 2: learn real time applications using event handling with validations.

CO 3: trained to write a well formed / valid XML document.

CO 4: acknowledge to provide database connectivity to web applications with examples.

CO 5: analyse to write a server-side java application called Servlet to catch form data sent from client, process it and store it on database.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS63	Elective – II-Operating Systems

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: analyse the concepts of processes in operating system and illustration of the scheduling of

processor for a given problem instance.

CO 2: identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.

CO 3: analyse memory management techniques.

CO 4: acquire knowledge of concepts of virtual memory and disk scheduling.

CO 5: understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS64	Elective – III-Computer Networks

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand computer network basics, network architecture and reference Models

CO 2: describe different types of protocols and their usage in networking.

CO 3: able to evaluate the design issues of network layer with routing algorithms like virtual versus Data gram and shortest path routing algorithm.

CO 4: identify the design issues of various layers and elements of various protocols in networking.

CO 5: examine the real time applications related to computer networks.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCL	Cluster – I-Foundation of Data Science

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Able to apply fundamental algorithmic ideas to process data.
2. Introduction to how to apply hypotheses and data into actionable predictions.
3. Document and transfer the results and effectively communicate the findings using visualization

techniques.

4. Evaluate graphical analysis and summary tables.

5.Understand the graphics parameters.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCL62	Cluster – II-Big Data Technology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the basic concepts of data sets and the current challenges in processing big data.

CO 2: evaluate various techniques to collect, manage, store, query and analyze various forms of big data.

CO 3: able to gain hands on experience on large scale analytical tools to solve problems in different industries for handling big data.

CO 4: understand the impact of big data for decision making and strategy.

CO 5: learn skills that will help them to solve complex real-world problems for taking decision.

At the end of the course student will

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCL62	Cluster – III-Data Analytics

CO 1: interpret results/solutions and identify appropriate course of action for a given managerial solution whether a problem or an opportunity.

CO 2: classify the continuous and categorical data and they will be beware of appropriate techniques to be used for analysing the classified data.

CO 3: utilize the basic concepts of probability including independence and conditional probability to calculate, interpret and communicate event probabilities and also the students will know the process of hypothesis testing, and CS will be able to evaluate research and null hypothesis and alternative hypothesis.

CO 4: be capable of understanding the concepts of correlation, multi collinearity and regression model and interpret the effect of variables, regression coefficients.

CO 5: understand and will be able to apply the concepts and methods underlying the analysis of univariate time series and context for interpretation of results.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS610	Cluster – IV-Distributed Systems

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate the concepts of Present a conceptual model of distributed systems

CO 2: analyze the key components of a distributed system and evaluate the trade-offs of alternative architectural models

CO 3: examine algorithm suitable for application in distributed systems. **CO 4:** acknowledge the prototype implementations of distributed systems **Co 5:** understand the challenges faced by future distributed systems

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS65	Cluster – V-Cloud Computing

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate the Cloud Computing and memorize different Cloud services and deployment models

CO 2: examine the importance of virtualization along with their technologies.

CO 3: acknowledge and examine different services in cloud computing

CO 4: analyze the components of open stack & Google Cloud platform and understand Mobile Cloud computing& describe the key components of Amazon web Service

CO 5: learn to design & develop backup strategies for cloud data based on features.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS66	Cluster–VI-Grid Computing

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate the basic concepts of Grid monitoring.

CO 2: analyze the strengths and limitations of Grid Computing.

CO 3: understand the architecture, infrastructure and delivery models of Grid Computing.

CO 4: enlighten the concept of virtualization.

CO 5: examine the core issues of Grid computing such as security, privacy and interoperability.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS67	Cluster – VII-Mobile Computing

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate the concepts of Mobile Computing and principles in wireless Communication systems in the present scenario.

CO 2: analyse the concept of Mobile IP Network Layers, Route Optimization.

CO 3: acknowledge the TCP/IP Protocols, Database Hoarding & Caching Techniques.

CO 4: expose to Data Dissemination, Data Synchronization.

CO 5: examine Mobile and ad-hoc networks, WAP, Bluetooth, Linux for Mobile Devices, Android.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS68	Cluster - VIII Mobile Application Development

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: install and Configure the System Mobile Application Development

CO 2: know the Basic Mobile Application Development

CO3: understand and apply the key technological principles and methods for delivering and maintaining *mobile applications*

CO 4: evaluate and contrast requirements *for mobile* platforms

CO 5: establish appropriate strategies for *development* and deployment.

Program	Semester	Course Code	Course Name
B.Sc. (MPCS, MECS, MSCA, MSCS, MCCS)	**VI**	CSC TCLS69	Cluster - IX Satellite Communication

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: make the students understand the basic concept in the field of Satellite communication and know how to place a satellite in an orbit

CO 2: calculate the link power budget.

CO 3: get a complete knowledge about the earth and space subsystems

CO 4: gain knowledge about the Satellite Access schemes

CO 5: gain knowledge about the Satellite system and mobile services provided

B. Com B (Computers)

Program	Semester	Course Code	Course Name
B. Com B (Computers)	**I**	CABT11A	Information Technology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Understand fundamental concepts of a computer and its basic components

CO2: Understand basic functioning of an operating system and customizing Windows Desktop

CO3: Analyze type of soft wares and programming languages

CO4: Have knowledge in basic Network and Data Communication Concepts

CO5: Understand the need of data mining and get familiarize with basics of new concepts like KDD, OLAP

Program	Semester	Course Code	Course Name
B. Com B (Computers)	**II**	CAB T24	E-Commerce and Web Designing

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Gain knowledge in E- commerce and its business models
2. Differentiate traditional and e – marketing and also gain knowledge in E-CRM and EPS
3. Understand the structure of HTML its basic tags
4. Implement various HTML tags for web page development
5. Understand about web page designing

Program	Semester	Course Code	Course Name
B. Com B (Computers)	**III**	CAB T31A	Programming with C&C++

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: To understand the meaning and generations of a programming language and to learn about c tokens.(PO5, PO7)

CO2: To learn about operators and conditional statements in C. (PO5, PO7)

CO3: To Gain knowledge about functions and to learn how to work with arrays- knowledge about strings and its functions. (PO5,

PO7)

CO4: To learn about the concepts of structures and unions. (PO5, PO7)

CO5: To understand about Object-Oriented Programming concepts using CPP (PO5, PO7)

Program	Semester	Course Code	Course Name
B. Com B (Computers)	**IV**	CAB T41B	Data Base Management System

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Understand the Characteristics and basics of Database.

CO2: Understand file system and Architecture of DBMS

CO3: Enlighten ER Diagrams, Relationship, Notation & schema.

CO4: Enlighten EER Diagrams & Applying constraints on data.

CO5: Implementing SQL commands retrieve, insert, modify and update

Program	Semester	Course Code	Course Name
B. Com B (Computers)	V	CAB T52 & CAB P52	Web technology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Analyze the concepts of HTML & WWW that make the web-based Applications.

CO 2: Evaluate the web pages more dynamic and interactive using CSS.

CO 3: Learn JAVA Script functions and statements.

CO 4: Provide various JAVA Script objects**.**

CO5: Perform validations using JAVA Script.

Program	Semester	Course Code	Course Name
B. Com B (Computers)	V	CAB T53	Programming in C

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the fundamentals of C programming.

CO 2: choose the loops and decision-making statements to solve the problem.

CO 3: acquire knowledge on functions to solve the given problem.

CO 4: implement different Operations on arrays.

CO 5: understand pointers, structures and unions.

Program	Semester	Course Code	Course Name
B. Com B (Computers)	**VI**	CAB T61	Database Management Systems

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: explore to develop and maintain and evaluate Management Systems.

CO 2: organize to gather, analyze and specify requirements of the data bases in organization.

CO 3: analyze to work as an effective member in developing database applications using modern software tools.

CO 4: acquire Knowledge to produce efficient, reliable, robust and cost-effective database solutions.

CO 5: deliver and evaluate Relational database systems.

Program	Semester	Course Code	Course Name
B. Com B (Computers)	**VI**	CAB T62	PHP & MYSQL

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the major areas to create and interact with databases.

CO 2: analyze, design and implement array methodologies.

CO 3: acquire Knowledge to select appropriate design techniques to solve real world problems using forms.

CO 4: evaluate the functions of specific types of web pages in relationship to an entire website.

CO 5: master the basics of SQL and construct queries efficiently using MYSQL.

Program	Semester	Course Code	Course Name
B. Com (Honors)	**VI**	CSCT61	Relational Database Management System

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Able to gain knowledge on file oriented systems, database systems evolution and components, risks and costs and database development.(PO2, PO3, PO4,PO7)

2. Able to gain knowledge on database design, models, normalization and implementing relational database. (PO2, PO3, PO4,PO7)

3. Able to gain knowledge in client server databases, manipulating server data. (PO2, PO3, PO4,PO7)

4. Able to learn about file organizations, implementing logical relationships, DBA functions, goals, etc. (PO2, PO3, PO4,PO7)

5. Able to implement SQL queries. (PO2, PO3, PO4,PO7)

B.Sc. (HONORS)

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**I**	CSH T11	Programming Fundamentals

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the fundamentals of C programming.

CO 2: explicate algorithms and can draw flowcharts to solve simple programming problems.

CO 3: analyze the data and its type to build programs and can do memory management using C.

CO 4: Perform analysis of design, implement, test, debug a program that uses calculations, loops, arrays, functions, pointer, structures etc.

CO 5: perform file operations in C programming for given applications.

Program	Sem ester	Course Code	Course Name
B. Sc (Honors)	**II**	CSH T21	Data Structures

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: learn fundamental concepts of Data structures and Acknowledge different searching and sorting techniques.

CO 2: analyze linear data structures- stacks, queues.

CO 3: analyze linear data structures- Linked lists.

CO 4: evaluate non-linear data structures tress and implement their operations.

CO 5: evaluate non-linear data structure Graphs and implement their operations.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**II**	CSH T23	Web Designing

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the basic internet principles to design a webpage.

CO 2: know how to design and develop a website.

CO 3: apply modern styles to web pages using CSS.

CO 4: perform tasks on operators, variables, arrays, control structures, functions and objects to interactive the web pages.

CO 5: exhibit and code data transfer scripts over business networks and the Internet.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**III**	CSH T31	Object Oriented Programming Using Java

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate the concepts and underlying principles of Object-Oriented Programming.

CO 2: analyze Decision making branching and looping problem-solving and programming skills using OOP concepts.

CO 3: learn class hierarchies, Arrays and interfaces.

CO 4: acknowledge the behaviour of Threads and Exception Handling in Java.

CO 5: Implement Applets, Packages and I/O Files.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**III**	CSH T32	Data Base Management System

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: evaluate the concepts of data base systems and data models.

CO 2: learn the concept of ER- model and EER model‟s generalization.

CO 3: analyze Functional dependencies& normalization of a database.

CO 4: analyze the Structured Query Language (SQL) for database manipulation.

CO 5: acknowledge the Transaction Management and concurrency control.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**IV**	CSH T41A	Python

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: acquire knowledge to solve simple programming problems.

CO 2: analyze the data and their type to build programs using lists and tuples.

CO 3: learn to design, implement, test, debug a program that uses calculations, loops, arrays, functions, modules and dictionaries etc.

CO 4: acknowledge the behaviour of Exception Handling and I/O Files in python.

CO 5: evaluate the concepts and underlying principles of Object-Oriented Programming

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**IV**	CSH T42	Advanced Java

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. **Explore** the basic concepts & techniques of java.
2. **Examine** to write robust, Graphical User Interface (GUI) applications and applets
3. **Acquire Knowledge** to connect an application with database
4. **Explore and analyse** the web development process.
5. **Evaluate** applications based upon the concepts of java & advance java.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**IV**	CSH T43	OPERATING SYSTEMS

CO 1: analyse the concepts of processes in operating system and illustration of the scheduling of processor for a given problem instance.

CO 2: identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.

CO 3: analyse memory management techniques.

CO 4: acquire knowledge of concepts of virtual memory and disk scheduling.

CO 5: understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**IV**	CSH T51	Operating Systems

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand Operating System Architectural design and its services. (PO1, PO3)
2. Implementation of Scheduling Algorithms. (PO2, PO4)
3. Analyze memory management techniques, concepts of virtual memory and disk scheduling. (PO2, PO3)
4. Understand the implementation of file systems and directories with the interfacing of IO devices with the operating system.
(PO1, PO5)
5. Identify the deadlock situation and provide appropriate solutions so that protection and security of the operating system is also maintained. (PO1, PO3, PO4)

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**V**	CSH T51	Operating Systems

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Analyze the various ways of structuring an operating system.
2. Analyze the various scheduling algorithms
3. Understand the description of deadlocks and number of different methods for preventing deadlocks in a computer system.
4. Understand the benefits of virtual memory system and concepts of demand paging, page replacement algorithms

5. Analyze the characteristics of mass storage devices

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**V**	CSH T53	Software Engineering

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: explore to develop and maintain and evaluate large-scale software systems.

CO 2: organize to gather, analyse and specify requirements of the software projects. **CO 3:** analyse to work as an effective member or leader of software engineering teams.

CO 4: acquire Knowledge to produce efficient, reliable, robust and cost-effective software solutions.

CO 5: deliver and Evaluate different testing methodologies.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**V**	CSH T52A	Computer Networks

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand computer network basics, network architecture and reference models.

CO 2: describe different types of protocols and their usage in networking.

CO 3: able to evaluate the design issues of network layer with routing algorithms like virtual versus Data gram and shortest path routing algorithm.

CO 4: identify the design issues of various layers and elements of various protocols in networking.

CO 5: examine the real time applications related to computer networks.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**VI**	CSH T62	Foundation of Data Science

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Able to apply fundamental algorithmic ideas to process data.

2. Introduction to how to apply hypotheses and data into actionable predictions.

3. Document and transfer the results and effectively communicate the findings using visualization techniques.

Evaluate graphical analysis and summary tables

5.Understand the graphics parameters.

Program	Semester	Course Code	Course Name
B. Sc (Honors)	**VI**	CSH T63	Big Data Technology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the basic concepts of data sets and the current challenges in processing big data.

CO 2: evaluate various techniques to collect, manage, store, query and analyze various forms of big data.

CO 3: able to gain hands on experience on large scale analytical tools to solve problems in different industries for handling big data.

CO 4: understand the impact of big data for decision making and strategy.

CO 5: learn skills that will help them to solve complex real-world problems for taking decision.

B.Sc. COMPUTER SCIENCE WITH COGNITIVE SYSTEMS (CSCS)

Program	Semester	Course Code	Course Name
B. Sc (CSCS)	**I**	CGS T11	Problem Solving in C

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand the evolution & functionality of Digital Computers and develop an algorithm for solving a given problem.
2. Understand tokens and control structures in C
3. Understand arrays and strings and implement them.
4. Understand the right way of using functions, pointers, structures and unions in C
5. Develop and test programs written in C files

Program	Semester	Course Code	Course Name
B. Sc (CSCS)	**I**	CGS T12	Operating Systems

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand the Computer and hardware basics
2. Understand the concept Operating Systems
3. Understand the concepts of process and CPU scheduling
4. Understand and know about Windows 10 OS
5. Understand and know about Windows Server 2012 OS

Program	Semester	Course Code	Course Name
B. Sc (CSCS)	**II**	CGS T22	Computer Networks

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand about Network hardware and software
2. Understand the concept of Networking
3. Understand the concepts of IP Addressing and Switching
4. Understand and know about VLAN and Routing protocols
5. Understand and know about Network Monitoring, WLAN, NAT

Program	Semester	Course Code	Course Name

B. Sc (CSCS)	**II**	CGS T21	Data Structures

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Learn the concepts of ADT and understand analysis of algorithms
2. Understand available Data Structures for data storage and processing.
3. Learn stacks, queues and their applications
4. Understand trees, graphs and implement their operations
5. Develop ability to implement different Sorting and Search methods

B.Sc. MATHEMATICS, STATISTICS, DATA SCIENCE (MSDS)

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**I**	DSC T11A	Introduction to Python Programming

Course Outcomes:

CO1: Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.

CO2: Express proficiency in the handling of strings and functions.

CO3: Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.

CO4: Identify the commonly used operations involving file systems and regular expressions.

CO5: Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python.

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**II**	DSC T21A	Data Structures using Python

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: **Understand** the features of Object-oriented programming in Python.

CO2: **Develop** and **analyze** the algorithms for stack operations and its applications.

CO3: **Implement** algorithms for Queue, Deque and Linked lists

CO4: **Implemen**t and analyze searching and sorting techniques.

CO5: **Design** algorithms for operations on trees and graphs.

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**III**	DSC T31A	Elements of R Programming

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Develop an R script and execute it (PO5,PO7)

CO2: Install, load and deploy the required packages, and build new packages for sharing and reusability (PO5,PO7)

CO3: Extract data from different sources using API and use it for data analysis (PO5,PO7)

CO4: Visualize and summarize the data (PO5,PO6,PO7)

CO5: Design application with database connectivity for data analysis (PO5,PO7)

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**IV**	DSC T42	Data Base Management System

COURSE OUTCOMES:

At the end of the course the student will be able to:

Understand the components of DBMS & design database using ER model (PO1, PO5)

2. Analyse database using SQL and extract data from database using Relational algebra SQL queries (PO1,

PO7)

3. Apply the normalization process for effective database design (PO1, PO7)

4. Analyse components of transaction processing, Concurrency control mechanisms (PO1, PO7)

5. Construct database using SQL queries (PO5, PO7)

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**IV**	DSC T01	Introduction to Java Programming

COURSE OUTCOMES:

At the end of the course the student will be able to:

1.Develop programs in the Java language that make strong use of decision making statements. (PO1, PO7)

2. Understand how to define classes and methods. Students will learn the basics of polymorphism through use of super-classes

and interfaces. (PO1, PO2)

3. Creating arrays and array lists, including those with references to generalized objects types. (PO1, PO2)

4. Design and implement network programming. (PO1, PO2)

5. Applying advanced technology in Java such as Internationalization, and Remote method Invocation (PO1, PO2)

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**V**	DSC T51	Machine Learning

COURSE OUTCOMES:

At the end of the course the student will be able to:

1.Identify the characteristics of machine learning. (PO5,PO7)

2. Summarize the Model building and evaluation approaches. (PO5,PO7)

3. Apply Bayesian learning and regression algorithms for real-world Problems (PO5, PO6, PO7).

4. Apply supervised learning algorithms to solve real-world Problems. (CO5, PO7).

5. Apply unsupervised learning algorithms for the real world data. (PO5, PO7).

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**V**	DSC T52	Data Visulization

			Using Power BI

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand the concept Power Pivot and interface with excel analytic ways. PO5,PO6,PO7)

2. How to combine data quickly from a variety of sources into your model. (PO5,PO6)

3. Prepare the data from various sources, clean, merge, filter data and calculate methods. (PO5,PO6,PO7)

4. Compose and choose the model, relationships between the models, user friendly models. (PO5,PO7)

5. Define BI environment, visualize the data. (PO5,PO7)

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**VI**	DSC T61	Introduction to Deep Learning

COURSE OUTCOMES:

At the end of the course the student will be able to:

Identify the idea behind Neural Networks. (PO5,PO7)

2. Summarize ANN Architecture.(PO5,PO7)

3. Apply ANN with Keras (PO5, PO6, PO7)

4. Summarize CNN Architecture (PO5, PO7)

5. Apply CNN with Keras.(PO5, PO6, PO7)

Program	Semester	Course Code	Course Name
B. Sc (MSDS)	**VI**	DSC T62	Big Data Technology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Identify and distinguish Big Data and its implications (PO1, PO7)

CO2: Understand the Hadoop system and Map-Reduce (PO5, PO7)

CO3: Access and process the data on Distributed file systems (PO5, PO7)

CO4: Manage job execution in Hadoop Environment (PO5, PO6, and PO7)

CO5: Develop big data solutions using Hive (PO5, PO7)

COMPUTER SCIENCE - SKILL DEVELOPMENT COURSES

Program	Semester	Course Code	Course Name
B.Sc (MSCS (A) & (B), MSCA & MECS)	**II**	SDCCSCT02	**DIGITAL MARKETING**

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Understand fundamental concepts of Digital Marketing and Channels.
2. Understand how to optimize a Web site and SEO optimization.
3. Understand Social Media Plan for measuring effects of digital marketing.

Program	Semester	Course Code	Course Name
B.Sc (CSCS)	**II**	SDCCSCP04	**INTRODUCTION TO WORKSHEETS (EXCEL AND VBA) LAB**

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Student will have basic knowledge regarding Excel.
2. Student will know about Data types and Operators using VBA
3. Student will learn to create Dash board, quiz and attendance tracker applications.

Program	Semester	Course Code	Course Name
B.Sc (MSDS)	**II**	SDCCSCP03	**WEB DEVELOPMENT WITH PYTHON**

			(DJANGO) LAB

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. How to create routes (or views), static content and files using Django.
2. How to connect templates with models to serve data dynamically.
3. How to create Models and how to connect them with Templates and Views, work with databases using SQLite.

Program	Semester	Course Code	Course Name
BA , BZC, AZC, FMB, FMC, MPC	**I**	LSC P02	**(ICT1) Computer Fundamentals and Office Tools**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Able to learn the basic features characteristics, applications of computer and introduction about windows operating system.

CO2: Able to learn the basic technicalities of creating Writer documents and presentations

CO3: Able to learn how to design a Calc Spreadsheet for general office.

Program	Semester	Course Code	Course Name
BA , BZC, AZC, FMB, FMC, MPC	**II**	**LSC P07**	**(ICT2) Internet Fundamentals and Web Tools**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: knowledge in network fundamentals.(PO1, PO7)

CO2: Understand social networking sites. (PO1, PO7)

CO3: Create web pages using HTML tags. (PO1, PO7)

COMPUTER SCIENCE - ADD ON COURSE

Program	Semester	Course Code	Course Name
ALL PROGRAMS	II	AOCT17	Digital Imaging

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: knowledge in editing of images.

CO2: Understand design the photographs.

CO3: Create photos.

DEPARTMENT OF STATISTICS

B.Sc (HONORS)

Program	Semester	Year	Course Code	Course Name
MSCS A, B, MSCA & MSDS	**I**	**2020 - 2021**	STAT11B	**DESCRIPTIVE STATISTICS AND THEORY OF PROBABILITY**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1. Students will gain the knowledge of various types of data, their organization and evaluation of summary measures such as non- central and central moments, measures of skewness and kurtosis.

CO2. Students will be able to conceptualize the probabilities of events including frequent and axiomatic approach. Simultaneously, they will learn the notion of conditional probability

CO3. Students can be able to understand the concepts of discrete and continuous random variables.

CO4. The students are capable of generating functions, and also to compute expectation values.

CO5. Students will gain knowledge related to the concept of generating functions and weak law of large numbers.

Program	Semester	Year	Course Code	Course Name
MSCS A, B, MSCA & MSDS	**II**	**2020-2021**	STAT21C	**PROBABILITY DISTRIBUTIONS AND STASTICAL METHODS**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Develop the basic knowledge in Probability distribution and uncertainty conditions we apply standard discrete probability distributions to identify the probability values.

CO2: Obtained the knowledge of applications on standard continuous distributions. Also get the knowledge in respect of usage in day-to-day life.

CO3: Analyses the qualitative data

CO4: Statistically analyze the strengths of relationship between variables.

CO5: To outline the vital area of regression models applicable in a wide variety of real time situations

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	**III**	STA T37	Statistical Inference

At the end of the course student will

Course Outcomes:

CO1:The students will be capable of applying sampling distributions to different situations and they will know the importance of order statistics.

CO2:The students will get a clear sense about point estimator, interval estimator and a good estimator and they will be able to find good estimator using different methods.

CO3:The students will know the process of hypothesis testing, and will be able to evaluate research and null hypothesis and alternative hypothesis and also capable of understand the obtained values, significance, critical region and types of errors.

CO4:The student has a clearknowledge of when to apply large sample test and small sample test.

CO5:The student attains both theoretical and practical knowledge of parametric and non-parametric statistics and it's assumptions to explore the proper and suitable statistics measurements and indicators to reveal the right reference about a given population.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	**IV**	STA T41B	Sample Techniques and Design of experiments

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: know the knowledge of sampling errors and non -sampling errors

CO 2: be capable of understanding the random sampling in SRSWR and SRSWOR

CO 3: gain the knowledge of analysis of variance

CO 4: have clear knowledge of experimentation and replication etc

CO 5: attain both theoretic and practical knowledge of design of experiments.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS &MSCA)	**IV**	STA T01	Applied Statistics

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Students will gain the knowledge to measure the Mortality and Fertility rates and the Construction of Life tables.

CO2: Students will be able to construct the Quality Control charts for Variables.

CO3: Students will be able to construct the Quality Control charts for Attributes.

CO4: Students will obtain the knowledge on asses the population growth by using vital statistics.

Co5: Students will be able to assess the normalization processes of different scores and estimating the IQ levels.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS &MSCA)	**V**	STA T51	Design of Sample Surveys

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the principles underlying sampling as a means of making inferences about a population.

CO 2: know the difference between randomization theory and model based analysis.

CO 3: get a clear knowledge of the bias and sampling variability and strategies for reducing them.

CO 4: be capable of distinguishing the errors as sampling and non-sampling errors and know the preventive steps to avoid them.

CO 5: learn the knowledge of conducting sampling by using different methods in appropriate situations.

Program	Semester	Course Code	Course Name

B.Sc. (MSCS&MSCA)	**V**	STA T52	Linear Programming Techniques

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: able to formulate a given simplified description of a suitable real world problem as a linear programming model in general, standard and canonical forms.

CO 2: be able to sketch a graphical representation of a two-dimensional linear programming model given.

CO 3: classify a two-dimensional linear programming model by the type of its solution.

CO 4: have a clear sense of solving an LPP using graphical, simplex, Big-M, two phase methods.

CO 5: able to write primal-dual pair to a given Linear Programming Problem.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MSCS&MSCA)	**VI**	STA TEL61	Elective - Paper – I Operations Research

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to identify and develop description of the real system and also can understand the mathematical tools that are needed to solve optimization problems.

CO 2: be able to develop a model and solving technique. Analyze the results and propose recommendation in language understandable to the decision making process in Management Engineering.

CO 3: be capable of designing nee simple models to improve decision-making and develop critical thinking and objective analysis of decision problems.

CO 4: understand the characteristics of different types of decision-making environments and the appropriate decision-making approaches and tools to be used in each type.

CO 5: be able to build and solve transportation models, assignment models, replacement models and sequencing models.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc(MSCS&MSCA)	**VI**	**STA TELS62**	Elective – Paper - II Applied Statistics

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to understand the meaning of the term index number and get accustomed to the use of some widely used index numbers.

Co 2: be familiar with the sources of vital statistics data, how to interpret such data and how to perform basic tests to evaluate them.

Co 3: be capable of using the concepts of consumer, producer and total surplus to explain why market typically leads to efficient outcomes.

Co 4: be able to critically assess the information related to the study of behaviour and mental processes and use the critical assessment in forming conclusions and arguments.

Co 5: be able to judge implication of these bases for the functioning of official statistics and quality of the data in official statistics and also they will understand the fundamentals of measurement in official statistics.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc(MSCS&MSCA)	**VI**	STA TCL61	Cluster – Paper - I Hybrid Operations Research Models

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: have a clear idea of the reasons for holding inventories.

CO 2: understand the economic order quantity model and economic production quantity model and they will be capable of solving such typical problems.

CO 3: be able to use the statistical tools PERT (Project evaluation review technique) in Project Management to analyze and represent the tasks involved in completing a project.

CO 4: be able to determine the expected execution time for each task in a project and also able to differentiate critical and non-critical tasks.

CO 5: analyze the cost-volume-profit relationship and forecast through learning curve theory.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc.(MSCS&MSCA)	VI	STA TCL62	Cluster – Paper - II Stochastic Operations Research Models

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to recognize and model strategic behavior to predict when and how the actions will have an influence on others actions and also to exploit strategic situations for the benefit of their own.

CO 2: be able to distinguish a game situation from a pure individuals decision problem.

CO 3: define and explain basic concepts in the theory, Markov processes and Queueing systems.

CO 4: have a clear knowledge of pure birth processes, pure death process, waiting time, arrival time, departure times, traffic intensity etc.,

CO 5: minimize the average cost of being in Queuing system and the cost of service and also they can find the optimum service rate.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	VI	**STA TCLS63**	Cluster – Paper - III Time Series

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to present time series in an information method, both graphically and with summary statistics.

CO 2: be able to develop stationary and non- stationary and seasonal and non- seasonal time series models.

CO 3: understand and will be able to apply the concepts and methods underlying the analysis of univariate time series and context for interpretation of results.

CO 4: be able to know how to decompose a time series into trend, seasonal and irregular components.

CO 5: be able to identify linear, quadratic, gompertz and logistic models and also they will be able to describe models for seasonal variation including additive and multiplication model.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	VI	**STA TCLS65**	Cluster – Paper – IV Design of Experiments

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to understand the role of between- group and within –group variability in testing difference between group‟s means.

CO 2: be able to encounter the principles of randomization, replication and stratification and also to know how they apply to practical examples.

CO 3: be able to explore the general theory of factorial and block designs and understand the theory to find appropriate designs for specific applications.

CO 4: be able to evaluate designs using common optimality criteria and use them to critically compare competing designs.

CO 5: be able to analyse the results of a designed experiment in order to conduct the appropriate statistical analysis of the data.

DEPARTMENT OF STATISTICS (Data Science)

Program	Semester	Year	Course Code	Course Name
B.Sc. MSDS	**I**	**2020 - 2021**	STAT11B	**DESCRIPTIVE STATISTICS AND THEORY OF PROBABILITY**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1. Students will gain the knowledge of various types of data, their organization and evaluation of summary measures such as non- central and central moments, measures of skewness and kurtosis.

CO2. Students will be able to conceptualize the probabilities of events including frequent and axiomatic approach. Simultaneously, they will learn the notion of conditional probability

CO3. Students can be able to understand the concepts of discrete and continuous random variables.

CO4. The students are capable of generating functions, and also to compute expectation values.

CO5. Students will gain knowledge related to the concept of generating functions and weak law of large numbers.

Program	Semester	Year	Course Code	Course Name
B.Sc. MSDS	**II**	**2020 - 2021**	STAT21C	**PROBABILITY DISTRIBUTIONS AND STASTICAL METHODS**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Develop the basic knowledge in Probability distribution and uncertainty conditions we apply standard discrete probability distributions to identify the probability values.

CO2: Obtained the knowledge of applications on standard continuous distributions. Also get the knowledge in respect of usage in day-to-day life.

CO3: Analyses the qualitative data

CO4: Statistically analyze the strengths of relationship between variables.

CO5: To outline the vital area of regression models applicable in a wide variety of real time situations

Program	Semester	Course Code	Course Name
B.Sc. MSDS	**III**	STA T37	Statistical Inference

At the end of the course student will

Course Outcomes:

CO1:The students will be capable of applying sampling distributions to different situations and they will know the importance of order statistics.

CO2:The students will get a clear sense about point estimator, interval estimator and a good estimator and they will be able to find good estimator using different methods.

CO3:The students will know the process of hypothesis testing, and will be able to evaluate research and null hypothesis and alternative hypothesis and also capable of understand the obtained values, significance, critical region and types of errors.

CO4:The student has a clearknowledge of when to apply large sample test and small sample test.

CO5:The student attains both theoretical and practical knowledge of parametric and non-parametric statistics and it's assumptions to explore the proper and suitable statistics measurements and indicators to reveal the right reference about a given population.

Program	Semester	Course Code	Course Name
B.Sc. MSDS	**III**	STA T01	Applied Statistics

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1:Students will gain the knowledge to measure the Mortality and Fertility rates and the Construction of Life tables.

CO2:Students will be able to construct the Quality Control charts for Variables.

CO3:Students will be able to construct the Quality Control charts for Attributes.

CO4:Students will obtain the knowledge on asses the population growth by using vital statistics.

Co5:Students will be able to assess the normalization processes of different scores and estimating the IQ levels.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	**IV**	STA T41B	Sample Techniques and Design of experiments

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: know the knowledge of sampling errors and non -sampling errors

CO 2: be capable of understanding the random sampling in SRSWR and SRSWOR

CO 3: gain the knowledge of analysis of variance

CO 4: have clear knowledge of experimentation and replication etc

CO 5: attain both theoretic and practical knowledge of design of experiments.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS &MSCA)	**V**	STA T51	Design of Sample Surveys

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the principles underlying sampling as a means of making inferences about a population.

CO 2: know the difference between randomization theory and model based analysis.

CO 3: get a clear knowledge of the bias and sampling variability and strategies for reducing them.

CO 4: be capable of distinguishing the errors as sampling and non-sampling errors and know the preventive steps to avoid them.

CO 5: learn the knowledge of conducting sampling by using different methods in appropriate situations.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	**V**	STA T56	**MULTIVARIATE ANALYSIS**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Students will understand the importance of multi-collinearity in regression modelling.

CO2: Students will gain theoretical knowledge of Multivariate Normal distribution with their properties.

CO3: Students will be able to understand the classification and discrimination procedures of two multivariate normal distributions.

CO4: Students will obtain the knowledge in testing the multi parameters by using Generalized T^2 Statistic and Mahalanobis D^2 statistic. Also their applications.

CO5: Students will gain the knowledge in grouping the similar objectives in multi way directions using cluster analysis.

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	**VI**	STA T64	TIME SERIES

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: To know the basic differences between the components of a time series and its applications. PO - 5

CO2: Knowledge and importance of trend. Measurement of trend and its estimation PO - 6

CO3: The computation skills to calculate and estimate the seasonal component and Deseasonalistion PO – 7

CO 4 Knowledge and importance of Cyclical component and on some of its measures. PO - 6

CO 5 Knowledge and importance of Random component and some of Forecasting measures. PO - 7

Program	Semester	Course Code	Course Name
B.Sc. (MSCS&MSCA)	**VI**	STA T65	OERATIONS RESEARCH FOR DATA SCIENCE

CO 1: be able to identify and develop description of the real system and also can understand the mathematical tools that are needed to solve optimization problems.

CO 2: understand the apply the transportation problem

CO 3: be able to develop a model and solving techniques in CPM & PERT.

CO 4: be capable of designing nee simple models of Queueing theory

CO 5: be able to gain knowledge in simulation

DEPARTMENT OF ELECTRONICS

ELECTRONIC CIRCUITS & ANALOG IC APPLICATIONS

Program	Semester	Course Code	Course Name
BSC MECS	I	ELE T11B	CIRCUIT THEORY AND ELECTRONIC DEVICES

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: To remember the concept of current & voltage in circuits.

CO2: To understand various Electrical networks by using principles of network theorems.

CO 3: To apply the behavior of R, C network with DC & sinusoidal excitation.

CO4: To analyze the behavior of Inductor and it various states

CO5: To evaluate the concept of Resonance & R, L, C network with variation of any one of it

Program	Semester	Course Code	Course Name
BSC MECS	II	ELE T21C	DIGITAL ELECTRONICS

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Students will use the concept of digital fundamentals in various applications
2. Will be able to analyze, design, build, and trouble shoot a broad range of Combinational circuits using digital IC's
3. Can demonstrate working of different logic families and their characteristics
4. Obtain familiarity of the basics of Programmable logic circuits

Program	Semester	Course Code	Course Name
BSC MECS	**III**	**ELE T31**	**DIGITAL ELECTRONICS**

5. Attain familiarity with Real time digital operations.

COURSE OUTCOMES:

At the end of the course the student will be able to:

1. Students will use the concept of digital fundamentals in various applications

2. Will be able to analyze, design, build, and trouble shoot a broad range of Combinational circuits using digital IC's

3. Can demonstrate working of different logic families and their characteristics

4. Obtain familiarity of the basics of Programmable logic circuits

5. Attain familiarity with Real time digital operation.

Program	Semester	Course Code	Course Name
BSC MECS	**III**	**ELE T01**	**ANALOG CIRCUITS AND COMMUNICATIONS**

COURSE OUTCOMES:

At the end of the course the student will be able to:

C01: Analyze important types of integrated circuits.

C02: The ability to design practical circuits that perform the desired operation.

C03: Ability to Select the appropriate integrated circuit modules to build a given application.

C04: Use of different modulation and demodulation techniques used in analog communication.

C05 : Attain familiarity with Radiowave communication.

Program	Semester	Course Code	Course Name
BSC MECS	**IV**	**ELE T41A**	**MICROCONTROLLERS AND INTERFACING**

COURSE OUTCOMES:

At the end of the course the student will be able to:

- The student can gain good knowledge on microcontrollers and implement in practical applications.
- Learn Interfacing of Microcontroller .

Get familiar with real time operating system.

Program	Semester	Course Code	Course Name
B.Sc(MECS)	**V**	ELE T51	Analog and Digital Communications

At the end of the course student will

CO 1: gain good knowledge on analog and digital communications.

CO 2: be able to analyse signals in time domain and frequency domain.

CO 3: implement modulation and demodulation techniques in various transmission environments.

CO 4: be able to compete with real time digital communication techniques.

CO 5: implement innovative skills in upgrading latest technologies in communications.

Program	Semester	Course Code	Course Name
B.Sc(MECS)	**V**	ELE T52	Micro-Processor Systems

At the end of the course student will

CO 1: Design systems using memory chips and peripheral chips for 16bit 8086 microprocessor.

CO 2: Understand device techniques for faster execution of instructions, improve speed of operations and enhance performance of microprocessor.

CO 3: Understand Multicore processor and its advantages.

CO 4: Enhance the skills of programming.

CO 5: be familiar with implanting innovative projects using Microprocessor.

Program	Semester	Course Code	Course Name
B.Sc(MECS)	**VI**	ELE TEL61	Micro Controller and Interfaces

CO 1: gain good knowledge of microcontrollers and implement in practical applications.

CO 2: apply different interfacing units with Microcontrollers, Understand Multicore processor and its advantages.

CO 3: learn about real time operating systems.

CO 4: be able to perform task specified programs.

CO 5: Design projects using Kiel vision software &Microcontrollers.

Program	Semester	Course Code	Course Name
B.Sc(MECS)	**VI**	ELE TCL61	Embedded System Design

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: gain knowledge of Embedded systems and implement in practical applications.

CO 2: get an ability to be an effective member or leader in a technical team.

CO 3: be committed to quality, timelines and continuous improvement.

CO 4: designing Robotic circuits and implementing the software programming techniques..

CO 5: be familiar with real time devices.

Program	Semester	Course Code	Course Name
B.Sc(MECS)	**VI**	ELE TCL62	Electronic Instrumentation

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: design a system, component or process to meet desired need in electrical engineering.

CO 2: able to balance bridges to find unknown values.

CO 3: know how to measure different parameters using oscilloscope.

CO 4: use and analyse different modes of operations of various measuring instruments.

CO 5: be able to handle and fix any technical issues in small scale industrial instrumentations.

Program	Semester	Course Code	Course Name
BSC (HONORS)	**I**	**ELE T12**	**DIGITAL ELECTRONICS**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1:Students will use the concept of digital fundamentals in various applications

CO2:Will be able to analyze, design, build, and trouble shoot a broad range of Combinational circuits using digital IC's

CO3:Can demonstrate working of different logic families and their characteristics

CO4:Obtain familiarity of the basics of Programmable logic circuits

CO5:Attain familiarity with Real time digital operation.

Program	Semester	Course Code	Course Name
BSC (HONORS)	**II**	ELE T22	Micro Controllers

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: gain good knowledge of microcontrollers and implement in practical applications.

CO 2: apply different interfacing units with Microcontrollers, Understand Multicore processor and its advantages.

CO 3: learn about real time operating systems.

CO 4: be able to perform task specified programs.

CO 5: Design projects using Kiel vision software &Microcontrollers.

DEPARTMENT OF BOTANY

Program	Semester	Course Code	Course Name
B.Sc (BZC)	**I**	BOT T11A	**FUNDAMENTALS OF MICROBES AND NON-VASCULAR PLANTS**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO-1: Explain origin of life on the earth and Illustrate diversity among the viruses and prokaryotic organisms and can categorize them.

CO-2:Analyze and ascertain the plant disease symptoms, agricultural and industrial importance of bacteria

CO-3:Understand economic, ecological importance of lichens, fungi and identify disease symptoms of fungi

CO-4:Classify, understand the structure, lifecycle and economic importance of Algae

CO-5; Understand and explain the general characters, structure, reproduction and sporophyte evolution in bryophytes.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**II**	BOT T21A	BASICS OF VASCULAR PLANTS AND PHYTOGEOGRAPHY

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO-1: Classify & know morphology, anatomy, reproduction and life cycles and justify evolutionary trends in Pteridophytes to adapt for land habitat.

CO-2 Classify, know morphology, anatomy, reproduction and life cycles of Gymnosperms and explain the process of fossilization and compare the characteristics of extinct and extant plants.

CO-3 Critically understands various taxonomical aids for identification of Angiosperms.

Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.

CO-4 Evaluate the ecological, ethnic and economic value of different tracheophytes and summarize their goods and services for human welfare.

CO-5Understand the principles of Phytogeography and locate different phytogeographical regions of the world and India and can analyze their floristic wealth.

Program	Semester	Course Code	Course Name
B.Sc (BZC)	**III**	BOT T31A	Plant Taxonomy, Anatomy and Embryology

COURSE OUTCOMES:

At the end of the course the student will be able to:

Co1:Understand on the organization of tissues and tissue systems in plants.

Co2: Illustrate and interpret various aspects of embryology.

Co3:Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.

Co4:Appraise various qualitative and quantitative parameters to study the population and community ecology.

Co5:Correlate the importance of biodiversity and consequences due to its loss and enlist the endemic/endangered flora and fauna from two biodiversity hot spots in India and assess strategies for their conservation.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**IV**	BOT T01	Plant Physiology and Metabolism

COURSE OUTCOMES:

At the end of the course the student will be able to:

Co1: Comprehend the importance of water in plant life and mechanisms for transport of water and solutes in plants.

Co2: Evaluate the role of minerals in plant nutrition and their deficiency symptoms, Interpret the role of enzymes in plant metabolism.

Co3: Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.

Co4: Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.

Co5: Evaluate the phytohormonesthat regulate growth and development in plants ,examine the role of light on flowering and explain physiology of plants under stress conditions.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**IV**	BOT T41A	CELL BIOLOGY, GENETICS

			AND PLANT BREEDING

COURSE OUTCOMES:

At the end of the course the student will be able to:

Co1: Distinguish prokaryotic and eukaryotic cells and design the model of a cell.

Co2: Explain the organization of a eukaryotic chromosome and the structure of genetic material.

Co3 : Discuss the basics of Mendelian genetics, its variations and interpret inheritance of traits in living beings and elucidate the role of extra-chromosomal genetic material for inheritance of characters.

Co4:Evaluate the structure, function and regulation of genetic material.

Co5:Understand the application of principles and modern techniques in plant breeding and explain the procedures of selection and hybridization for improvement of crops.

Program	Semester	Course Code	Course Name
B.Sc (BZC)	**V**	BOT T51	Cell biology, Genetics and Plant Breeding

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand structure and functions of cell, types of cell division.

CO 2: have knowledge of structure and function of genes, process of inheritance.

CO 3: comprehend sources and types of genetic variation and explain their importance for plant improvement.

CO 4: assess methods used in plant breeding.

CO5: carry out specific plant breeding activities, such as selection of parental germplasm, observation and recording of phenotypic variation and selection among progeny.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**V**	BOT T52	Plant Ecology and Phytogeography

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: comprehend the structure and function of ecosystem

CO 2: recognize the effect of abiotic factors on the biotic components (through field trips)

CO 3: be aware of basic principles of ecology, emphasizing population, community and ecosystem ecology.

CO 4: assess biodiversity values, levels, threats to bio diversity, bio diversity hot spots and conservation methods.

CO 5: acquaint with the fundamentals of distribution of plants.

CO 6: explore the botanical richness of India and floristic variations of world, Endemism and effect of climate in distribution of vegetation types.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	BOT TEL61	Elective Paper – I Plant Tissue Culture And Its Biotechnological Applications

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: comprehend the fundamentals of totipotency, principle and basic protocols for establishment and maintenance of plants in tissue culture and micro propagation**.**

CO 2: appraise the advantages of *in vitro* propagation**. CO 3:** examine the morphogenesis during tissue culture.

CO 4: acquaint the direct and indirect methods of gene transfer.

CO 5: know basic and latest advances in Genetic Engineering and Recombinant DNA Technology.

CO 6: evaluate applications of Biotechnology in Plant science (Know the transgenic technology for the improvement of quality and quantity of plant and thereby product.) & Human welfare (in areas like medical, microbial, environmental, agricultural and forensic science) Realize the application and importance of plant tissue culture and transgenic plants.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	BOT TELS64	Elective Paper - II Organic Farming and Sustainable Agriculture

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: learn about the Organic Farmer Training Program which is committed to prepare students to start and operate their own farms.

CO 2: manage existing farm businesses or non-profit farms

CO 3: Work for other organizations promoting farm and food education and /or food production.

CO4: Expand Human Life.

CO5: Control Global Environment.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	**BOT TELS65**	Elective – Paper - III Nursery Gardening and Floriculture

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand the role of a gardener

CO 2: study and understand types of gardens

CO 3: gain knowledge of the aesthetic value of gardens.

Co 4: Develop Gardening is a Healthy practice.

Co 5: Develop Nutri Garden.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	BOT TCL61	Cluster - I Plant Diversity and Human Welfare

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: describe the major crops grown around the world and assess their use for human beings.

CO 2: compare the uses of plants for materials, health and pleasure.

CO 3: evaluate the plant diversity and understand how scientific speculation, aesthetic appreciation and ethical concerns are useful in conservation of biodiversity.

CO 4: know about role of plants in the functioning of the global ecosystem.

CO 5: get equipped with skills related to field based studies.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	BOT TCL62	Cluster II -Ethno Botany and Medicinal Botany

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: identify specific plant taxa**.**

CO 2: examine characteristics of plant taxa used in traditional, indigenous systems of medicine.

CO 3: be introduced to different perspectives on treating ailments by using herbals.

CO 4: appraise Key Plants which are examples in Indian context.

CO 5: Recognize Plants which are examples of Global Ethno botanical Phenomena.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	BOT TCL63	Cluster – III:Pharmacognosy and Phytochemistry

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to apprehend and understand herbal Science.

CO 2: identify medicinal plants and classification of medicinal Plants.

CO 3: acquaint with Phyto Chemistry of useful plants, formulations and their uses.

CO 4: comprehend preparations of herbal medicines, toxicity of useful plants.

CO 5: evaluate plant based chemicals for adulteration and contamination.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	**BOT TCLS64**	Cluster - I Biological Instrumentation and methodology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: know parts of microscope, type and its principles

CO 2: Get the theoretical concepts of some instruments useful in biological process

CO 3: Understand different methods of staining techniques and understand nutritional requirements of living organisms.

Co 4: Using Biological instrument to find microbes.

Co 5: Learn the methodology- using Research.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	**BOT TCLS65**	Cluster - II Mushroom Culture and Technology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: appreciate the importance of embarking on self-employment and develop confidence and personal skills.

CO 2: take up Mushroom Cultivation and run it profitably

CO 3: maintain Mushroom farm in a hygienic and scientific methods

CO 4: take up value added products of Mushroom i.e. preparation of Mushroom Pickle, Powder, Papad and different items of food.

DEPARTMENT OF ZOOLOGY

ANIMAL DIVERSITY - BIOLOGY OF NON-CHORDATES

Program	Semester	Year	Course Code	Course Name
BZC	**I**	**2020-2021**	ZOOT11A	**ANIMAL DIVERSITY - BIOLOGY OF NON-CHORDATES**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1	Gain knowledge in the fundamental concepts underlying the structural complexity in the organization of invertebrates.
CO 2	Understand biology and pathogenicity of parasites and their adaptations analyse remedial and preventive measures and promote the same in public domain.
CO 3	Appreciate and evaluate the economic, commercial, medicinal and culture importance of invertebrates and their larval stages in relation to phylogeny
CO 4	Describe the significance of connecting links in understanding the concept of evolution
CO 5	Explain the significance of specific phenomena in different groups of invertebrates in relation to their adaptability for survival
CO 6	Comprehend the systems biology of individual phyla with a specific type study and understand the origin and evolutionary relationship of different phyla and appreciate the uniqueness of individual phyla.

ANIMAL DIVERSITY - BIOLOGY OF CHORDATES

Program	Semester	Year	Course Code	Course Name
BZC	**II**	**2020-2021**	ZOOT21A	**ANIMAL DIVERSITY - BIOLOGY OF CHORDATES**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1	Gain knowledge in the major Chordate groups, describe their salient features, appreciate the diversity and analyse the uniqueness of different groups.
CO 2	Understand the fundamental organization of chordates and evaluate the similarities and differences among the different groups of chordates in the light of evolutionary significance.
CO 3	Comprehend and compare the morphology and anatomy of different classes of chordates and apply the same to their fitness in the ecological habitats.
CO 4	Develop the skill of identifying the vertebrate fauna in general and South Indian fauna in specific.
CO 5	Acquaint with the significance of unique mechanisms and behavioural patterns exhibited by different groups of chordates.

CELL BIOLOGY, CELLULAR METABOLISM, GENETICS, ORGANIC EVOLUTION AND ANIMAL BEHAVIOUR

Program	**Semester**	**Year**	**Course Code**	**Course Name**
BZC	**III**	**2020-2021**	ZOOT31A	**CELL BIOLOGY, CELLULAR METABOLISM, GENETICS, ORGANIC EVOLUTION AND ANIMAL BEHAVIOUR**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1	Describe the ultra-structure of an animal cell and the structure and functions of various cellular organelle.
CO 2	Analyse the classification andchemistry of biomolecules responsible for sustenance of life in living organisms and their metabolism.

CO 3	Comprehend and apply genetic information for correcting the genetic disorders through manipulation of genetic material.
CO 4	Understand the principles and forces of evolution of life on earth, the process of evolution of new species and apply the same to develop new and advanced varieties of animals for the benefit of the society.
CO 5	Analyse the various underlying concepts of ethology and evaluate the varied behaviour patterns of animals basing on these concepts and explore the behaviour of different animals in protective, social and nesting aspects.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**IV**	ZOO T02	Immunology and Animal Biotechnology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1Gain knowledge in the types of cells and organs involved in the immune system, role of antigens, antibodies and different types of vaccines in obtaining immunity.

CO 2 Understand the basic concepts of immune system and hypersensitivity reactions and apply the same in identification of diseases and describe the triggering and regulation of immunological response.

CO 3 Acquire basic knowledge in r DNA technology and acquaint with the techniques of PCR, hybridization and DNA sequencing.

CO 4 Comprehend Animal Cell Culture technology, Reproductive technologies and techniques.

CO 5 Apply the techniques of animal biotechnology in various fields like industry, medicine, animal husbandry etc., for improving the quality of life.

CO 6 Acquaint with safety measures in using the techniques and develop skills in handling

Program	Semester	Course Code	Course Name
B.Sc(BZ	**IV**	ZOO T41	Embryology, Animal Physiology and Ecology

C)			

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Gain knowledge in the fundamentals of developmental stages, functional aspects of a vertebrate and ecological influence of animal life.

CO 2: Comprehend and describe the process of formation and fusion of gametes and appraise the significance of foetal membranes and placenta in the formation of an embryo.

CO 3: Understand the mechanism of functioning of the different organ systems of a vertebrate and analyze their coordination in adapting the animal to the changing environment.

CO 4: Identify and describe the histology of various organs of a mammal and developmental stages of chick embryo at different hours of incubation.

CO 5: Develop skill in conducting tests for identification of the presence of biomolecules and excretory products and estimating various water parameters.

CO 6: be acquainted with the structural and functional aspects of an ecosystem, concept of community and population - their characteristics and interactions and analyse the adaptations of animals to specific habitat and explain peculiarities in their distribution in different zoogeographical realms.

At the end of the course student will

Program	**Semester**	**Course Code**	**Course Name**
B.Sc(BZC)	**V**	ZOO T51	Animal Biotechnology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Acquire basic knowledge in various tools and techniques of rDNA technology, Animal cell culture technology, Reproductive technologies and techniques and applied aspects of animal biotechnology.

CO 2: Comprehend the concepts and principles of rDNA technology, Animal cell culture, manipulation of reproduction in animals and application of Animal biotechnology in different fields.

CO 3: Appraise the significance of Hybridoma technology, gene transfer, reproductive manipulation, fermentation, genetic manipulation and genetic engineering in improving the quality of life.

CO 4: be acquainted with safety measures in using the techniques and develop skills in handling and maintaining laboratory equipment.

CO 5: Apply the knowledge and skills in pursuing project work in the biotechnology laboratories.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**V**	ZOOT52	Animal Husbandry

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Gain knowledge in the methods of caring and managing animals in the areas of welfare, health, behavior, housing, nutrition and reproduction.

CO 2: Develop skill in performing routine Animal Husbandry practices such as handling, feeding, disease management, breeding management and neonatal care.

CO 3: Analyze the characteristics of different species/breeds of poultry and dairy animals and apply their significance in the selection of the best breed for better yield.

CO 4: Apply the knowledge in designing and managing animal facilities optimized to specific needs of animals being housed.

CO 5: Understand the concept of post-mortem in analyzing the cause of mortality of farm animals and evaluate with effective solutions for problems associated with the sustainability and growth of production of farm animals.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	ZOO TEL61	Elective –I Immunology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Gain knowledge in the types of cells and organs involved in the immune system, role of antigens and antibodies in obtaining immunity**.**

CO 2: Understand the basic concepts of immune system, auto immunity and immune deficiency diseases and apply the same in identification of diseases.

CO 3: be acquainted with the recent trends in immunological techniques and different types of vaccines and monoclonal antibodies.

CO 4: Comprehend the concept of hypersensitivity reactions and analyze the causes for different types of allergy.

CO 5: Develop practical skill in performing various immunological tests for the diagnosis of immunity related diseases.

CO 6: Study the basic concept of cancer and analyze different types of cancer.

Program	Semester	Course Code	Course Name
B.Sc., BZC	**VI**	**ZOO TELS62**	Elective – II Bioinformatics

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Gain knowledge in the important software tools and techniques of Bioinformatics and various web based resources for biological information and concepts of pharmacogenomics.

CO 2: Explain the basic principles f Bioinformatics, analyse biological data using a variety of tools and interpret the outputs from tools used and make meaningful predictions from these outputs.

CO 3: Appreciate the importance and scope of Bioinformatics and understand the approaches to drug discovery description and applications of various algorithms, phylogenetic analysis and patterns of alignment.

CO 4: Interpret relationships among living things and analyse and solve biological problems from molecular to ecosystem level.

CO 5: Develop skill to create computer programs that facilitate biological data analysis.

CO 6: Apply the knowledge and skills in pair wise sequences and multiple sequence alignment of protein & DNA sequences, design and conduct experiments to analyze and interpret data.

Program	Semester	Course Code	Course Name
B.Sc(BZC)	**VI**	ZOO TCL61	Cluster - I Principles of Aquaculture

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Acquire knowledge of the different types of aquaculture, culture systems and practices, designing and construction of aqua farms, seed resources, nutrition and feeds, management of carp culture ponds and culture of shell fish.

CO 2: Understand and compare the historical and current status of aquaculture at global and national level.

CO 3: Analyze the vast variety of aquatic species cultivated in different water bodies and be

acquainted with different world wide culture systems and practices.

CO 4: Appreciate the nutritional requirements of the cultured species and the importance of natural and artificial feeds in culture.

CO 5: Comprehend the pre stocking, stocking and post stocking management techniques and harvesting of Indian major carps and develop skill in recording biometric data of a fish, identification of diseases of fish and prawn and the treatment.

CO 6: Study and appraise the significance of diversity mgtt15in culture species like fish prawns, shrimp, pearl oysters, sea weeds and ornamental fish and the importance of their culture for economic benefit.

Program	Sem ester	Course Code	Course Name
B.Sc(BZC)	**VI**	ZOO TCL62	Cluster - II Aquaculture Management

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Acquire knowledge of the management techniques of breeding and hatchery of fish and shrimp/prawn, water quality, food and feeding aspects and disease control in a culture pond**.**

CO 2: Understand the principles of aquaculture economics, analyze fish marketing strategies, explore the opportunities for Fisheries Training and Education in India and comprehend the genetic manipulation techniques for improvement of stock and yield.

CO 3: Determine various water quality and soil parameters and develop skill in monitoring systems for problems in culture ponds.

CO 4: be Acquainted with the types of feeds, feed formulations and feeding strategies and analyze the significance of supplementary feeds and develop skill in feed evaluation.

CO 5: Appraise the principles of disease diagnosis, health management of fish and shell fish and apply the same in a culture practice.

CO 6: Identify the common zooplankton, aquatic insects and aquatic weeds and appraise their significance as live food in culture ponds.

Program	Sem este r	Course Code	Course Name

B.Sc(BZC)	**VI**	ZOO TCL63	Cluster - III Post-Harvest Technology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Acquire knowledge of the principles and methods of fish handling and preservation, processing of fish and sea weed products.

CO 2: Understand the concept of sanitation, quality control, quality assurance, management and certification of fish and fish products**.**

CO 3: Appraise the significance of hygiene in processing plants and regulatory affairs in industries and implement the same in the chosen field of profession.

CO 4: be acquainted with the concept of Hazard Analysis and Critical Control Points (HACCP) in sea food safety.

CO 5: Evaluate the need for maintaining national and international standards for quality Assurance**.**

CO 6: Apply the techniques and concepts of culture practices and post-harvest technology in pursuing project work.

Program	**Sem ester**	**Course Code**	**Course Name**
B.Sc(BZC)	**VI**	**ZOO TCLS64**	Cluster - I Clinical Biochemistry

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Describe the principles of Analytical Chemistry in clinical biochemistry.

CO 2: Describe and explain the metabolism of carbohydrates, Proteins and lipids and diseases related to their abnormal metabolism.

CO 3: Examine and identify the role of enzymes and their importance in clinical diagnosis.

CO 4: Examine and identify acid base -balance and regulatory mechanisms with in the body to include the tests used for analyte, physiology involved and clinical significance.

CO 5: Describe Skill in collecting samples from patients, identifying laboratory investigations in connection with diseases and correlate laboratory test result with common diseases or conditions.

Program	Sem ester	Course Code	Course Name
B.Sc(BZC)	**VI**	**ZOO TCLS65**	Cluster – II Haematology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Apply principles of safety, quality assurance and quality control on haematology

CO 2: Describe the blood components.

CO 3: Gain knowledge in depth about the pathology and pathophysiology of hematological disorders.

CO 4: Evaluate normal and abnormal cell morphology with associated diseases.

CO 5: Describe the principles of laboratory testing including automated blood cell counters, flow cytometry and coagulation assays.

CO 6: Develop skill in effective, appropriate and timely performance of diagnostic procedures relevant to haematology, identify sources of error and interpret clinical significance of results.

Program	Sem ester	Course Code	Course Name
B.Sc(BZC)	**VI**	**ZOO TCLS66**	Cluster - III Clinical Microbiology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Understand the basic microbial structure and function, study the comparative characteristics of prokaryotes and eukaryotes and explain the structural similarities and differences among various physiological groups of bacteria.

CO 2: Evaluate methods used to identify infectious agent in the clinical microbiology lab.

CO 3: Recognize and diagnose common infectious diseases from the clinical presentation and associated microbiology.

CO 4: Gain knowledge in Clinical Mycology and Virology and their related diseases.

CO 5: Identify common infectious agent and the diseases they cause using serological techniques.

CO 6: Demonstrate practical skills in microscopy, staining techniques, aseptic techniques, preparation of culture media and handle tasks safely and effectively.

DEPARTMENT OF ZOOLOGY (AQUACULTURE)

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
AZC	I	AQTT 11A	BASIC PRINCIPLES OF AQUACULTURE

Course outcomes:

At the end of the course, the student will be able to:

CO 1 : Understand the concept of blue revolution, analyse the history and compare the present status of aquaculture at global, national and state levels and its significance over agriculture and gain knowledge in the various aquaculture resources and advantages of culture over capture.

CO 2: Acquire knowledge in the different types of aquaculture, culture systems and culture methods in practice worldwide.

CO 3: Gain knowledge in the different types of culture ponds.

CO 4: Understand the arrangement of different types of ponds in a fish farm and design an ideal fish farm.

CO 5: Comprehend the best management practices to be adopted in aquaculture for good yield and acquire the skill in the analysis of water and soil parameters of a culture pond.

CO 6: Identify the different types of weeds and predators in a culture pond and suggest the suitable control measures for their eradication.

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
AZC	I I	AQTT 21	BIOLOGY OF FIN FISH & SHELL FISH

At the end of the course, the student will be able to:

CO 1: Classify the finfish and shellfish, analyse the cultivable species of fin fish and shellfish of commercial importance, describe their salient features and appreciate the diversity and uniqueness of different groups.

CO 2: Comprehend the relationship between food and growth, age and growth, hormones and growth in cultivable fin and shell fish.

CO 3 Gain knowledge and compare the feeding habits, mouth parts and digestive systems and analyze gut contents.

CO 4 Develop the skill of identifying the gut contents, gonadal maturity and fecundity and comprehend the concept of breeding behaviour, embryonic and larval development of cultivable aquatic fin and shell fish.

CO 5: Acquaint with the significance of unique mechanisms and behavioural patterns like sense organs, electric organs, buoyancy, moulting and metamorphosis exhibited by finfish and shell fish.

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
AZC	I I I	AQ TT3 1A	FRESH WATER &BRACKISHWATER AQUACULTURE

Course outcomes:

At the end of the course, the student will be able to;

CO 1: Acquire knowledge in the culture aspects of Indian major carps and exotic carps and analyze the impact of their compatibility on the yield.

CO 2: Understand the status and scope of freshwater and brackish water aquaculture at global, national and state level.

CO 3: Understand the biology, seed resources of freshwater prawn species and management practices of their culture ponds.

CO 4: Understand the biology and culture aspects of different commercially important cultivable brackish water fishes.

CO 5: Gain knowledge in the hatchery technology and culture practices of shrimp

CO 6: Acquire knowledge in the biology and culture aspects of cultivable brackish water crabs, pearl oysters and edible oysters.

PROGRAMME	SEMESTER	COURSE CODE	COURSE NAME
AZC	III	AQTT01	FISH NUTRITION AND FEED TECHNOLOGY

Course outcomes:

At the end of the course, the student will be able to:

CO 1 : Understand the need for requirement of nutrients for different stages of cultivable finfish and shellfish, sources of nutrients, their effect on growth and the factors affecting energy partitioning.

CO 2: Analyze different forms of feed and their significance and different devices and methods used in feeding of cultivable finfish and shellfish and understand the conversion efficiency and ratio of the feed.

CO 3: Develop skill in the formulation and manufacture of feed and its water stability efficiency and adopt proper storage methods.

CO 4: Comprehend the importance of additives and non-nutrient ingredients in the fish feed and explain the nutritional deficiency symptoms in the cultured fish and the importance of natural and supplementary feeds in balanced diet.

CO 5: Develop skill in the quantitative estimation of various nutritional ingredients of fish feeds

PROGRAMME	**SEMESTER**	**COURSE CODE**	**COURSE NAME**
AZC	IV	AQTT42	FISH HEALTH MANAGEMENT, FISHERIES ECONOMICS, EXTENSION AND MARKETING

Course outcomes:

At the end of the course, the student will be able to:

CO 1 : Describe the various fungal, viral and bacterial diseases of fin fish and their prevention and therapy.

CO 2: Explain the various viral, bacterial and protozoan diseases of shell fish and their prevention and therapy.

CO 3: Describe the fish health management strategies.

CO 4: Explain different fisheries economic policies.

CO 5: Describe the various schemes for the welfare of fishermen community.

DEPARTMENT OF APPLIED NUTRITION

Program	Semester	Year	Course Code	Course Name
FMB	**I**	**2020 - 2021**	FSTT11B	**FUNDAMENTALS OF FOOD TECHNOLOGY**

COURSE OUTCOMES

At the end of the course the student will be able to

- Know the Functions of food
- Comprehend various cooking methods and apply them at appropriate time
- Apply knowledge in describing the composition of various foods as well as physical and chemical changes that takes place in processing and cooking
- use storage and selection techniques of various foods
- understand the fundamentals of food science
-

Program	Semester	Year	Course Code	Course Name
FMB	**II**	**2020 - 2021**	FSTT21A	**FOOD AND NUTRITION**

COURSE OUTCOMES

At the end of the course the student will be able to

- Acquiring knowledge about macro and micro nutrients and their functions.
- Knowing the consequences of deficiency of taking nutrients.
- Understanding importance of non-nutrients in human nutrition
- Apply the concepts of nutrition and food and its relation to health.
- Students can apply the knowledge of nutrition for disease prevention in the real time

Program	Semester	Course Code	Course Name
B.Sc(FMB &FMC)	**III**	FSTT31A	Technology of Plant Foods

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Understand current trends in the field of Food Technology.

CO 2: Learn about machinery involved in processing of various food stuffs.

CO 3: Comprehend various changes that occur during food processing and storage.

CO 4: Understand several applications of food processing from raw material stage to the end product stage.

CO 5: be able to develop new and better products with the help of new and novel technologies.

Program	Semester	Course Code	Course Name
B.Sc (FMB &FMC)	**IV**	FST T41A	Technology of Animal Foods

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to know the processing and preservation of egg, milk and milk products.

CO 2: understand various handling and processing methods of livestock.

CO 3: handle different preservation techniques of animal foods to extend the shelf life.

CO 4: able to identify and develop number of by-products from animal foods. **CO 5:** be able to standardize different types of beverages and convenience foods. **At the end of the course student will**

Program	Semester	Course Code	Course Name
B.Sc (FMB &FMC)	**V**	FST T51	Food Preservation Technology

CO 1: be able to use specific preservation techniques for specific food preservation.

CO 2: measure and evaluate the chemical preservative used in processed food.

CO 3: be able to develop pectin rich products**.**

CO 4: Analyze the principles and practices of laminated materials and solve the packaging problems.

CO 5: be able to apply these preservative methods to avoid surplus wastage of seasonal foods.

Program	Semester	Course Code	Course Name
B.Sc(FMB &FMC)	**V**	FST T52	Food Safety, Food Quality& Sensory Evaluation

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to apply the principles of food safety and quality control to assure the quality of food products.

CO 2: be able to know the degradation of food through contamination of various microorganisms.

CO 3: attain knowledge of role of food additives, toxicological evaluation and monitoring in food preparations.

CO 4: critically review and interpret relevant literature.

CO 5: work together by possessing hypothesis and evaluate specific processed foods.

Program	Semester	Course Code	Course Name
B.Sc (FMB & FMC)	**VI**	FST TEL61	Elective – Paper – I -Family Nutrition

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to assess the nutritional status of the individual.

CO 2: attain knowledge on physiological changes of different age groups.

CO 3: plan a balanced diet based on the economic status of the family.

CO 4: plan and create nutritional awareness among public.

CO 5: plan, develop and create awareness among public about Low Cost Nutritious Foods.

Program	Semester	Course Code	Course Name
B.Sc. (FMB & FMC)	VI	FST TELS62	Elective – Paper – II-Food Service Management

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to supervise and train others in a food service setting.

CO 2: acquire knowledge concerning production, process and expenses to manage food service budgets.

CO 3: adhere to regulations, standards and good manufacturing practices of food service industry.

CO 4: develop various menus for Food Service production.

CO 5: apply food service management in operation & maintenance of equipment.

At the end of the course students will

Program	Semester	Course Code	Course Name
B.Sc(FMB & FMC)	**VI**	FST TCL61	Cluster- Paper – I- Diet Therapy

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: able to deal nutritional issues with patiently.

CO 2: plan Pre-operative and Post-operative diets.

CO 3: council patients regarding chronic diseases.

CO 4: be able to solve problems with the help of current research**. CO 5:** able to plan diets for patients with multiple diseases**.**

Program	Semester	Course Code	Course Name
B.Sc. (FMB & FMC)	VI	FST TCLS63	Cluster – Paper - II - Neutraceuticals and Functional foods

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: gain knowledge on role of nutraceuticals and functional foods in current scenario.

CO 2: acquaint knowledge on nutraceutical constituents present in various food products.

CO 3: Gain knowledge on role of nutraceuticals and functional foods in various health conditions.

CO 4: able to identify the difference between a dietary supplement and functional foods/nutraceuticals, the labelling and marketing of these substances.

CO 5: get awareness on the latest research area on nutraceutical and functional food components.

DEPARTMENT OF MICROBIOLOGY

INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY

Program	Semester	Year	Course Code	Course Name
FMB	**I**	**2020 - 2021**	MICT11B	**INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Understand the basic microbial structure and function and study the structural similarities and differences among various groups of Microorganisms and their importance

CO 2: Acquire knowledge on various Culture media and their applications and also understand various physical and chemical means of sterilization.

CO 3: understand the principle components of microscope and its applications and various staining procedures.

CO 4: Gain knowledge on Principles and kinetics of Microbial growth and different ways of measuring microbial growth

CO 5: Understand the Structure and function of prokaryotic and Eukaryotic cellular components.

MICROBIAL PHYSIOLOGY AND BIOCHEMISTRY

Program	Semester	Year	Course Code	Course Name
FMB	**II**	**2020 - 2021**	MICT21B	**MICROBIAL PHYSIOLOGY AND BIOCHEMISTRY**

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Understand the major biomolecules –carbohydrates, lipids their classification, structure and function

CO 2: Specify the biological significance of biomolecules in metabolism

CO 3: Gain knowledge on structure, properties and function of nucleic acids

CO 4: Explain aerobic and anaerobic respiration and various intermediary mechanisms involved and oxidative phosphorylation

CO 5: Acquire knowledge of properties, structure, function of enzymes, enzyme kinetics and enzyme inhibition

Program	**Semester**	**Year**	**Course Code**	**Course Name**
FMB,FMC	**III**		MICT31A	**MEDICAL MICROBIOLOGY AND IMMUNOLOGY**

At the end of the course students will

CO 1: Understand at advanced level of microbial virulence mechanism and host response to infection

CO 2: Analyse the pathogenesis of some important bacterial, fungal and viral Infections of humans and be able to identify causative agents.

CO 3: Acquire knowledge of principles of Chemotherapy

CO 4:. Understand the key concepts in immunology and overall organization of the immune system.

CO 5: Demonstrate the application of molecular techniques to medical microbiology and also understand the significance of Hypersensitivity and Autoimmunity.

Programme	**Semester**	**Course Code**	**Course Name**
FMB,FMC	IV	MICT01	**INDUSTRIAL MICROBIOLOGY**

At the end of the course students will

CO 1: Acquire knowledge of screening of industrially important microorganisms and techniques applicable for improvement of microorganisms

CO 2: Understand the rationale in medium formulation & design for microbial fermentation, sterilization of medium and different types of fermentation processes. CO 3: Identify the significance of industrially important microbial enzymes

CO 4:Gain knowledge of role of micro-organism in various industrial productions .

CO 5: Be familiar with various microbial product recovery and purification process

Programme	Semester	Course Code	Course Name
FMB,FMC	IV	MICT42	**MOLECULAR BIOLOGY AND MICROBIAL GENETICS**

At the end of the course students will

CO 1: Gain knowledge about DNA &RNA as genetic material and their replication.

CO 2: will understand the concept of horizontal gene transfer mechanisms among the bacteria and also acquire knowledge of mutations.

CO 3: Be familiar with concept of gene & Genetic code

CO 4:Be able to explain types of genes and its regulation by different operons

CO 5: understand the molecular mechanism involved in transcription & translation.

Program	Semester	Course Code	Course Name
B.Sc(FMB &FMC)	**V**	MIC T51	Environmental and Agricultural Microbiology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: understand different habitats and types of microorganisms and their interactions in the environment.

CO 2: understand water pot ability and methods to detect the quality of water.

CO 3: understand the specific methods and application of microorganisms in sewage treatment.

CO 4: understanding the specific microorganisms in biogeochemical cycling and their role in plant growth promotion.

CO 5: understand the concept of plant disease and their management.

Program	Semester	Course Code	Course Name
B.Sc (FMB &FMC)	**V**	MICT52	Elective – Paper- I Microbial Diagnosis in Health Clinics

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Demonstrate a comprehensive knowledge and understanding of medically significant microorganisms and their relationship to diagnosis and treatment.

CO 2: understand and appreciate the interaction between micro-organisms and parasites, anti-microbial agents and microbial resistance.

CO 3: Analyze and report on complex research questions and solve problems, plan a work program or diagnostic strategy and learn independently.

CO 4: critically assess and interrupt scientific literature.

CO 5: Pursue career in Medical diagnostics, Microbiology and research in clinical Microbiology.

Program	Semester	Course Code	Course Name
B.Sc(FMB &FMC)	V	MIC TELS62	Elective – Paper - II Microbial Biotechnology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to evaluate the role of micro-organisms in specific biotechnological processes

CO 2: be able to explain the complex processes behind the development of genetically modified organisms

CO 3: demonstrate a clear understanding of how biochemical pathways relate to biotechnological applications.

CO 4: acquire capability to conduct search for original research literature in the selected area of Microbiology and biotechnology

CO 5: evaluate the relative support for different perspectives in potentially controversial issues.

Program	Semester	Course Code	Course Name
B.Sc (FMB &FMC)	**VI**	MIC TEL61	Elective – Paper - I Food and Industrial Microbiology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Understand the role and significance of microbial inactivation, adaptation and environmental factors (i.e., Aw, pH, temperature) on growth and response of microorganisms in various environments.

CO 2: be able to identify the important pathogens and spoilage microorganisms in foods and the conditions under which they grow.**CO 3:** Identify techniques applicable for improvement of microorganisms based on known biochemical pathways and regulatory mechanisms.

CO 4: Understand the rationale in medium formulation & design for microbial fermentation, sterilization of medium and different types of fermentation processes.

CO 5: Acquires experimental knowledge of microbial production of various industrial products such as alcohol.

Program	Semester	Course Code	Course Name
B.Sc (FMB &FMC)	VI	MIC TCLS63	Elective – Paper - II - Molecular Virology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to identify the taxonomic Classification and morphology of viruses.

CO 2: be able to learn the basic principles of molecular virology using specific examples

CO 3: be capable to know the replication of virus and their genetic information.

CO 4: acquire knowledge of virus replication of virus and host cell interactions in the development of antiviral agents.

CO 5: be capable of understanding virus interactions and possibility of novel therapeutic approaches.

Program	Semester	Course	Course Name

		Code	
B.Sc (FM B &FMC)	**VI**	MIC TCL61	Cluster - I Microbial Quality Control in Food and Pharmaceutical Industries

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Recognize importance of biosafety practices and interpret basics of biosafety and bioethics and its impact on food and pharm industries.

CO 2: Evaluate microbial content testing, Microbial assay and sterility testing including technology advancements such as PCR.

CO 3: Demonstrate isolation and identification of microbes by using different microbiological media.

CO 4: Learn formal process for hazard identification, risk assessment and control to effectively manage workplace and safety hazards through HACCP.

CO 5: Develop capabilities in critical review of microbiology literature, scientific communication (oral and written), problem solving, learning in small groups, independent learning and time management.

DEPARTMENT OF BIOCHEMISTRY

Programme	Semester	Course Code	Course Name
FMB	I	BCHTIIB	BIOMOLECULES

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: The student gains knowledge in the chemistry of biomolecules such as water, carbohydrates, lipids, proteins and nucleic acids which make up all the living organisms including humans

CO2: This will enable the student to understand the importance of these biomolecules in living organisms and effects of their alterations in diseases occurring in plants, animals and humans.

CO3: The practicals will give the expertise to the student for analysis of any biological or non-biological sample for identification of its chemical composition

CO4: Will gain knowledge on importance of water in living system

CO5: Will be able to work as a Quality analyst

Programme	Semester	Course Code	Course Name
FMB	II	BCHT21B	Bio Analytical Techniques

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Will be able to acquire basic lab skills

CO2: The student will learn the various analytical techniques and their applications in separation and isolation of cells and tissues for studying their functional abnormalities

CO3: The knowledge in the biochemical techniques will enable the student for isolation, purification and chemical characterization of compounds from plants and microbes which will have medical or commercial importance.

CO4: The practical will provide the expertise to the student for quantification of electrolytes and other metal ions, hormones.

CO5: The expertise gained by the student in this course can be useful in food industries, pharma industries, and clinical diagnostic lab.

Programme	Semester	Course Code	Course Name
FMB	**III**	BCHT31A	Enzymology, Bioenergetics and Intermediary Metabolism

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: The student will get knowledge in enzymes, their physiological importance, and other applications.

CO2: The student will know how the nutrients such as carbohydrates, lipids, and proteins get metabolized for the purpose of energy and other physiological functions in the body. This will enable the student to understand the pathophysiology of metabolic diseases such as metabolic errors etc., which occur due to alterations in metabolisms

CO3: The student will provide the expertise for quantification of enzymes activities, glucose, proteins and lipid levels in blood which will have clinical applications.

CO4: Will be able to estimate enzymes present in body fluids in normal and disease conditions

CO5: Will be able to establish a Diagnostic and research Laboratory.

Programme	Semester	Course Code	Course Name
FMB	IV	BCHT42	PHYSIOLOGY, ENDOCRINOLOGY AND CLINICAL BIOCHEMISTRY

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Will be able will understand the importance of blood.

CO2: Will be able to provide knowledge in hormones, their functions and the diseases occurring due to alterations in the levels of hormones.

CO3: Will be able to estimate various components in the blood sample and explain their clinical significance.

CO4: Will be able to distinguish normal constituents and abnormal constituents of urine.

CO5: Will be enable to do diagnostic tests for liver diseases, gastrointestinal diseases, and renal diseases.

Programme	Semester	Course Code	Course Name
FMB	IV	BCHT43	Immunology, Genetics and Applied Biochemistry

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO1: Will be able to get knowledge on Commercial applications

CO2: Will be able to use knowledge for Research work

CO3: Will be able to get knowledge on immunology

CO4: Will be able to get knowledge on Recombinant DNA Technology.

Program	Semester	Course Code	Course Name
B.Sc (FMB)	V	BCH T51	Elective – I Human Physiology and Endocrinology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to know the structure and functions of various organ systems in the human body.

CO 2: be able to know about endocrine glands, their secretions and functions

CO 3: be able to know the role of hormones in body metabolic functions

CO 4: be able to establish a Diagnostic and Research Laboratory

CO 5: be able to get knowledge of various disorders caused by the imbalance of endocrine secretions

Program	Semester	Course Code	Course Name
B.Sc (FMB)	V	BCH T52	Cluster – I Biotechnology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: develop an understanding of Gene regulation mechanism.

CO 2: be able to known about Genetic Engineering and Tools used for recombinant DNA technology and Molecular techniques

CO 3: be able to understand Molecular Biology tools and Techniques

CO 4: be able to synthesize new products like hormones, proteins and probiotics and Medicines

CO 5: start a small scale industry.

Program	Semester	Course Code	Course Name
B.Sc (FMB)	V	BCH TELS52	Cluster – II Molecular Biology

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to understand the mechanism of Gene Synthesis

CO 2: be able to produce recombinant DNA products

CO 3: be able to become a Molecular Biologist

CO 4: be able to establish Molecular Biotechnology Laboratory

CO 5: be able to start a small scale industry

Program	Semester	Course Code	Course Name
B.Sc (FMB)	**VI**	BCH TEL61	Elective – I Cell Biology and Genetics

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to differentiate cells

CO 2: learn to use knowledge for Research work

CO 3: know how to establish a Cell biology Lab.

CO 4: gain knowledge of various factors that damage DNA and their repair Mechanisms

CO 5: recognize different types of cell divisions in living organisms.

Program	Semester	Course Code	Course Name
B.Sc (FMB)	**VI**	BCH TCL61	Cluster – I Clinical Biochemistry

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: differentiate the metabolic disorders of the body

CO 2: identify the disorders by using serum markers

CO 3: estimate various components in the blood sample and know their clinical significance

CO 4: distinguish normal constituents and abnormal constituents of urine.

CO 5: be able to establish a Diagnostic Lab

Program	Semester	Course Code	Course Name
B.Sc. (FMB)	VI	BCH TCLS62	Cluster - II Biochemical Correlations in Diseases

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to know about structure and functions of organs and organ systems.

CO 2: be able to identity various disorders by using serum markers

CO 3: be able to use different methods for identification of disorders caused due to defect in metabolism.

CO 4: be able to recognize various disorders related to defects in various metabolic path ways.

CO5: be able to know the importance of vitamins and minerals, various biomolecules and their deficiency disorders in human beings.

DEPARTMENT OF TELUGU

Program	Semester	Course Code	Course Name
B.A, B.Com, B.B.A, B.Sc	**I**	TEL T11A	Telugu-I

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: learn more about the Telugu language, such as Telugu prosody variant than other languages.

CO 2: make them study modern literature in the form of textual poetry and create enthusiasm to write a poem of their own.

.**CO 3:** develop interest in literary reading such as short stories.

CO 4: be able to increase the effective poetry writing skills.

CO 5: learn to develop their personalities by studying poetry.

Program	Semester	Course Code	Course Name
B.A, B.Com, B.B.A, B.Sc	**II**	TEL T21A	Telugu-II

At the end of the course the student will be able to:

CO 1: learn more about the Telugu language, such as Telugu prosody variant than other languages.

CO 2: make them study modern literature in the form of textual poetry and create enthusiasm to write a poem of their own.

.**CO 3:** develop interest in literary reading such as short stories.

CO 4: be able to increase the effective poetry writing skills.

CO 5: learn to develop their personalities by studying poetry.

Program	Semester	Course Code	Course Name
B.A, B.Com ,B.B.A, B.Sc	**III**	TEL T01A	Telugu-III

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Learn the unique features of Telugu language and the linguistic characteristics of the ancient classics.

CO 2: develop interest to study modern literature in the form of textual poetry

CO 3: develop listening writing and reading skills in Telugu.

CO 4: learn the prosodic aspects used by poets.

CO 5: Acquire knowledge of literary process such as poetry, prose, essay, novel, story, letter and drama.

DEPARTMENT OF HINDI

Program	Semester	Course Code	Course Name
B.A, B.Com, B.B.A, B.Sc	**I**	HIN T11A	Hindi-1

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to know Leadership qualities, moral values from gadyasandesh.

CO 2: learn knowledge of society from kathalok.

CO 3: learn sentence formation and grammar from vyakarana**.**

CO 4: be familiar with different words in government offices from karyalay Hindi**. CO 5:** be able to learn reading from avakaran.

Program	Semester	Course Code	Course Name
B.A, B.Com, B.B.A, B.Sc	**II**	HIN T21A	Hindi-II

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to know culture, traditions and importance of women from gadhyasandesh.

CO 2: learn good traditions from kathalok.

CO 3: know pusakmaangne ka pathr. Hindi sekne keliye bhae ko pathr,chutti pathr ,nowkari keliye pathr from Prayojanmulak Hindi.

CO 4: learn to use good language from vyakarana.

CO 5: know official words in hindi from karyalay hindi.

Program	Semester	Course Code	Course Name

B.A, B.Com, B.B.A, B.Sc	**III**	HIN T01	Hindi-III

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to know about history of bhakthikal, motherland, importance of artist and art of music from Kavya Deep.

CO 2: Acquire knowledge of history kaal, veergada kaal, bhakthi kaal from Hindi sahity ka ithihas.

CO 3: Learn samachar pathr, unemployment, computer ,paryavaran aur pradhushan from Sadaran Nibhand**. CO 4:** learn about translation from Anuvad.

CO 5: understand gnapan, suchana, paripathr from prayojanmulak Hindi.

DEPARTMENT OF ENGLISH

Program	**Semester**	**Course Code**	**Course Name**
B.A, B.Com, B.B.A, B.Sc	**I**	ENG T11B	English praxis-I

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to enrich vocabulary for effective communication.

CO 2: be able to understand the importance of knowledge and learn to transform India into a knowledge super power.

CO 3: understand the importance of living in the society and live for the society. Learn to use the importance of independent and personal freedom.

CO 4: Understand emotions like love and affection.

Program	**Semester**	**Course Code**	**Course Name**
B.A, B.Com, B.B.A, B.Sc,	**II**	ENG T21B	English praxis-II

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: be able to adopt scientific point of view which develops an objective attitude and a sense of humility.

Preserve universe. Will be able to handle real life situations and culture.

CO 2: Appreciate poetry and acquire Listening, Speaking, Reading and writing skills.

CO 3: be able to understand the way of the world.

CO 4: understand human nature and will be able to handle social issues.

Program	Semester	Course Code	Course Name
B.A,B.Com, B.B.A, B.Sc,	**III**	ENG T01A	English praxis-III

COURSE OUTCOMES:

At the end of the course the student will be able to:

CO 1: Acquire skills by learning LSRW skills.

CO 2: analyze and critically apprehend a variety of people and situations for an unbiased world view. **CO 3:** understand the importance of ethical values in life, balance career and family and serve society. **CO 4:** practice social skills for a holistic development.