



JSS MAHAVIDYAPEETHA

JSS COLLEGE OF ARTS COMMERCE AND SCIENCE

(Autonomous, NAAC 'A' Grade and College with Potential for Excellence)

Ooty Road Mysore

List of CO's & PO's (2019-20)



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JSS MAHAVIDYAPEETHA
JSS College of Arts, Commerce and Science (Autonomous)
Ooty Road, Mysuru - 570025
2019-20

Department: History
Program Code: BA24

Program: BA

PO ID	PO
BAHE24P01	Critically recognize the social, political, economic and cultural aspects of History
BAHE24P02	Demonstrate thinking skills by analyzing, synthesizing, and evaluating historical information from multiple sources
BAHE24P03	Correctly extract evidence from primary sources by analyzing and evaluating them in relation to their cultural and historical context
BAHE24P04	Develop an informed familiarity with multiple cultures
BAHE24P05	Emerge as a multifaceted personality who is self-dependent
BAHE24P06	Spread the messages of equality, nationality, social harmony and other human values
BAHE24P07	Comprehend the basic structures and processes of government systems and/or theoretical underpinnings
BAHE24P08	Analyze political problems, arguments, information, and/or theories
BAHE24P09	Apply methods appropriate for accumulating and interpreting data applicable to the Discipline of political science & English
BAHE24P10	Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

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JSS College of Arts, Commerce and Science (Autonomous)
Ooty Road, Mysuru - 570025
2019-2020

Department: History

Program: BA

Program Code: BA24

Course Title: HISTORY OF ANCIENT INDIA (UPTO 1100AD)

Course Code	COs
BAHE24CO1	Familiarise the students of early civilizations. The birth of new religions. Jainism and Budhism and the teachings of Mahaveera and Buddha
BAHE24CO2	Discuss ancient republics, establishment of great Empires political land military Adventures of out great rulers
BAHE24CO3	Gain knowledge of Economic, Social and religious conditions and education system of Ancient period
BAHE24CO4	Inspire the students through the great literary books and contributions to the growth of Art & Architectures
BAHE24CO5	Understanding the administration of our great kingdoms and foreign trade and commercial activities are of great values in the development of the state

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2019-2020

Department: History

Program: BA

Program Code: BA24

Course Title: HISTORY OF KARNATAKA (540-1565)

Course Code	COs
BAHE24CO1	Understand the historical growth of Karnataka, sources-Geographical feature and Early kingdom
BAHE24CO2	Enable the students to learn the contributions of Chalukyas, Rastrakutas and Hoysalas development of Art and Architecture.
BAHE24CO3	Understand the glorious days of Vijayanagara Empire. The developments of Economy, Social and religious life style, contribution, Administration and culture
BAHE24CO4	Gain knowledge about Bahamani and Adilshahi's Kingdom, their contribution to Education and Culture
BAHE24CO5	Helpful for the students to understand the policy of Wodeyar and their contributions to the of growth and development of Mysore

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2019-2020

Department: History

Program: BA

Program Code: BA24

Course Title: HISTORY OF MODERN INDIA (1498-1947)

Course Code	COs
BAHE24CO1	Understand the detailed picture of the heroic resistance Indian to the company's rule, the battle of Plassi , Buxar and Carnatic wars and their effects
BAHE24CO2	Develop the knowledge of Consolidation of the British rule regulating Act 1773, subsidiary allianace, doctrine of lapse and land revenue policies
BAHE24CO3	Indian renaissance and change of administration, the great revolt of 1857. It will inspire students to appreciate and respect national leaders and values of patriotism and nationalism
BAHE24CO4	Gain knowledge about foundation of Indian National congress. Role of moderates, extremists and Ghandhian era., to the students

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2019-2020

Department: History
Program Code: BA24

Program: BA

Course Title: HISTORY OF MODERN ASIA (1900-1990)

Course Code	COs
BAHE24CO1	Analyze the progress of Asian countries like China and Japan from insular nations to their present Dynamic position
BAHE24CO2	Understand to trace their role in world affairs in the last 3 decades of the 20 th Century
BAHE24CO3	Develop the knowledge about diverse countries of the region and provide an insight into the historical background
BAHE24CO4	Evaluate the basics of colonization and decolonization and analyse the areas of conflict in this vital region. Historical background of Iran, Arabs and Jews. Rise and growth of Arab nationalism, Zionist movement

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2019-2020

Department: History

Program: BA

Program Code: BA24

Course Title: HISTORY OF MODERN EUROPE (1789-1945)

Course Code	COs
BAHE24CO1	Enrich the knowledge to understand Europe before French revolution
BAHE24CO2	Europe of to-day which occupies a place of vital importance in world affairs
BAHE24CO3	learn the major events that challenged the life style of the people of Europe and their governments
BAHE24CO4	Acquire knowledge about the age of revolutions and the slogan of liberty equality and fraternity
BAHE24CO5	Understand the role played by the dictators and causes and impacts of World Wars
BAHE24CO6	Know the establishment of UNO and its Aims, Objectives and structures

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2019-2020

Department: History

Program: BA

Program Code: BA24

Course Title: INDIA AND CONTEMPORARY WORLD (1947-2000)

Course Code	COs
BAHE24CO1	Gain knowledge about the Birth of Indian Republic, Economic Development under Nehru
BAHE24CO2	Foreign Policy of India and major crisis in India
BAHE24CO3	Understand & update knowledge on contemporary, issues and challenges
BAHE24CO4	Understand the concepts of state and power in International relations
BAHE24CO5	Conceptualize the Relations between India and other countries Alliances.

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: ECONOMICS

Programme Name: BA

Programme Code: 31

Session/Year 2019-2020

List of POs & PSOs

POID	PO Statement
PO1	Critically recognizes the social, political, economic and cultural aspects of History
PO2	Demonstrate thinking skills by analysing and Evaluating relation to their cultural and historical context
PO3	Develop an informed familiarity with multiple cultures
PO 4	Correctly extracts evidence from primary sources
PO5	Demonstrate critical reading, writing and thinking skills
PO6	Explain, graph, and analyse key Economics Model

Course Title: Principles of Micro Economics –1 (1st sem)

Course Code: ELA21021/22/26/23/24

CO ID	CO Statement
CO1	Understand in details with examples Concepts of Micro and Macro Economics
CO2	Deliberate in depth laws of Demand
CO3	Understand in depth laws of utility.
CO4	Learn in details with examples meaning and properties of indifference curve
CO5	Deliberate in depth cost and revenue concepts
CO6	Understand the details of meaning and types of market

Course Title: Principles of Macro Economics –1 (3RD sem)

Course Code: ELC21021/22/26/23/24

List of COs

CO ID	CO Statement
CO1	Identify in with examples key variables of Macro Economics
CO2	Understand in details with examples Concepts of National Income
CO3	Identify in depth Marginal Efficiency of Capital
CO4	Specify the details of concepts of Multiplier
CO5	Identify the Characteristics of Keynesian Macro Economics

Course Title: Economics of Development (DSE) –1A (Vth sem)

Course Code: ELE21021/22/26/23/24

List of COs

CO ID	CO Statement
CO1	Learn in depth understand the concept of economic development and factors affects development,
CO2	Deliberate in details with examples differentiate economic development and growth
CO3	Identify the characteristics of demographic trends
CO4	Specify in depth Harrod-Domar growth model
CO5	Understand the classification and characteristics of Endogenous growth theory

Course Title: Financial Economics (SEC) – (Vth Sem)

Course Code: ELE21021/22/26/23/24

List of COs

CO ID	CO Statement
CO1	Formulate the Economics of Finance
CO2	Understand essential aspects of Financial Asset Valuation
CO3	Useful in a variety of Business setting including Investment
CO4	Evaluate Basic Theory Interest and Investment decisions under Uncertainty
CO5	Realize the Securities, Bonds, Prices and Yields

Course Title: Indian Economy (DSC) – (VIth Sem)

Course Code: ELE21021/22/26/23/24

List of COs

CO ID	CO Statement
CO1	Understand the characteristics of Indian agricultural policies
CO2	Identify the classification and characteristics of regional variation
CO3	Write down the classification and characteristics of New industrial policy
CO4	Specify in depth public and private sector
CO5	Identify in depth in Monetary policy

Course Title: Data Analysis (SEC) – (VIth sem)

Course Code: ELE21021/22/26/23/24

List of COs

CO ID	CO Statement
CO1	Gain the Knowledge about to Collection and presentation of Data
CO2	Understand meaning, types, Importance and source of Data
CO3	Differentiate population Census and Sample Survey
CO4	Developing the Knowledge about Univariate frequency distributions and Measures of Central Tendency
CO5	Practically Evaluate Bivariate Frequency Distribution, Correlation and Regression

JSS Mahavidyapeetha
JSSCollegeofArts,CommerceandScience

OotyRoad,Mysuru-570025,Karnataka,India

2019-20

NameoftheDepartment: POLITICALSCIENCE

Programmeoffered: BA

Programmecode:H EP/JPE22/25

I SEMESTER

Coursecode:ELA26022/ELA26025

Coursetitle	COId	CO
POLITICAL THEORY	CO1	Learn in depth meaning and nature of political Theory
	CO2	Deliberateindetailswithexamplesdifferencesbetweenpoliticsandpolitical theory
	CO3	Understand the characteristics of elements of state
	CO4	Specify the details of civil society
	CO5	Understand the classification and characteristic so frights
	CO6	Specify the classification and characteristics of democracy

PO/Id	PO
PO1	Criticallyrecognizesthesocial,political,economicandculturalaspectsofHistory.
PO2	Demonstrate thinking skills by analyzing, synthesizing, and evaluating them in relation to their cultural and historical context.
PO3	Correctly extracts evidence from primary sources by analyzing and evaluating them in relation to their cultural and historical context.
PO4	Develop an informed familiarity with multiple cultures.
PO5	Develop critical and quantitative thinking Skills
PO6	Apply economic analysis to everyday problems in real word situations

	PSO
PSO1	Understand theoretical and practical aspects of Economics and Geography
PSO2	Evaluate Economic behavior in consonance with Geographical factors
PSO3	Act as a stepping stone for one's success in competitive examinations
PSO4	Exerts its Influence on life and destiny of Human beings
PSO5	Suggest the policymakers about desirable changes to be made in Micro and Macro Economic issues based on geographical factors
PSO6	Gain ability to understand the economic problems in Geographical indicators

III SEMESTER Course code: ELC26022/ELC26025

Course title	COID	CO
COMPARATIVE GOVERNMENT AND POLITICS	CO1	Understand the classification and characteristics of electoral systems
	CO2	Understand the details of classification of political systems
	CO3	Understand in details with application if applicable contemporary debates
	CO4	Learn the classification and characteristics of contemporary debates on state.
	CO5	Understand the classification and characteristics of electoral systems

PO/Id	PO
PO1	Critically recognize the Social political economic and cultural aspects of History.
PO2	Demonstrate thinking skills by analyzing, synthesizing, and evaluating them in relation to their cultural and historical context.
PO3	Apply economic analysis to everyday problems in real word situations
PO4	Develop an informed familiarity with multiple cultures
PO5	Correctly extracts evidence from primary sources by analyzing and evaluating them in relation to their cultural and historical context.

V SEMESTER**Coursecode:ELE26022/ELE26025**

Course title	COId	Cos
Themes on comparative political theory	CO1	Understand in details with application if applicable democracy and governance
	CO2	Understand in details with application if applicable Indian political thought
	CO3	Specify in depth Indian political thought
	CO4	Identify the classification and characteristics of western political thought
	CO5	Understand in details with examples western political thought
	CO6	Understand in depth local government
	CO7	Learn the details of regulatory institutions
	CO8	Identify the classification and characteristics of lobbying institutions

PO/Id/No.	PO
PO1	Correctly extracts evidence from primary sources by analyzing and evaluating them in relation to their cultural and historical context.
PO2	Critically recognizes the social political, economic and cultural aspect so History.
PO3	Demonstrate thinking skills by analyzing, synthesizing, and evaluating them in relation to their cultural and historical context
PO4	Develop an informed familiarity with multiple cultures.
PO6	Explain, graph, and analyze key economics models.

V SEMESTER

CourseCode: ELE26222

Coursetitle	COI D	CO
LEGISLATIVE SUPPORT	CO1	Understand in depth legislative support
	CO2	Write down the details of legislative process
	CO3	Write down the details Of Legislative committees
	CO4	Learn in details with examples legislative committees
	CO5	Identify in details with application ,ifapplicable,budgetprocess

PO/Id/No.	PO
PO1	Demonstrate thinking skills by analyzing, synthesizing, and evaluating them in relation to their cultural and historical context.
PO2	Critically recognizes the social, political, economic and cultural aspect so History.
PO3	Develop an informed familiarity with multiple cultures.
PO4	Explain, graph, and analyze key economics models.
PO5	Correctly extracts evidence from primary sources by analyzing and evaluating them in relation to their cultural and historical context.

Coursetitle	CO /Id	COStatement
MODERN GOVERNMENTS	CO1	Understandingtheworld politics
	CO2	Enlightingtheworldgovernmentalsystem
	CO3	Developcomparativestudyongovernmentalsystems
PO/Id/No.	PO	
PO1	Critically recognizes Thesocial,political,economic and cultural aspect so History.	
PO2	Correctly extracts evidence from primary sources by analyzing and evaluating them in relation to their cultural and historical context.	
PO3	Demonstrate thinking skills by analyzing, synthesizing, and evaluating them in relation to their cultural and historical context.	

VI SEMESTER

COURSECODE:ELF26222/ELF26225

Coursetitle	CO Id	COStatement
PUBLIC ADMINISTRATION CONCEPTS AND THEORIES	CO1	Aimatunderstandingtheproceduralaspectsof
	CO1	Learn in depth Administration and Public Policy
	CO2	Specify the details of administrative theories
	CO3	Learn the classification and characteristics of administrative theories
	CO4	Deliberate the details of public policy
	CO5	Deliberate in details with examples public policy in India
	CO6	IdentifythecharacteristicsofpublicpolicyinIndia

PO/Id/No.	PO
PO1	Demonstrate thinking skills by analyzing, synthesizing, and evaluating them in relation to their cultural and historical context.
PO2	Critically recognizes the social, political ,economic and cultural aspect so History.
PO3	Develop an informed familiarity with multiple cultures.
PO4	Correctly extracts evidence from primary sources by analyzing and evaluating them in relation to their cultural and historical context.
PO5	Explain, graph, and analyze key economics models.
PO6	Demonstrate critical reading writing,thinking skills.

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Department: COMMERCE AND MANAGEMENT

Programme Name: B.COM

Programme Code:

Session/Year 2019-20

List of POs & PSOs

POID	PO Statement – On successful completion of this Programme, students will be able to work in ;
PO1	Industries and Multinational Companies
PO2	Banking Sectors and Insurance Companies
PO3	Financing and Leasing Companies
P04	Transport Agencies and Warehousing
P05	Stock Markets and Foreign Trade

Course Title: Principles and Practices of Auditing

Course Code: ENF 210

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Learn in depth to practice as an Auditor
CO2	Learn the characteristics of errors and frauds and minimize them in maintenance of books of accounts
CO3	Deliberate in details with examples audit of different types of organizations
CO4	Identify in detail the importance of Internal Control and Internal Check
Or as designed in the curriculum	

Course Title: Business Law

Course Code: ENF 220

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand in details various laws related to business and able to work as legal
CO2	adviser of business enterprises
CO3	Learn in depth and apply the basic legal knowledge to business enterprises
CO4	Understand the characteristics of legal environment and practice business ethics
Or as designed in the curriculum	

Course Title: Corporate Tax Planning

Course Code: ENF 230

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand in depth tax provisions to make managerial decisions effectively in various tax related matters
CO2	Learn in detail the procedure to be followed to assess the value and determine customs duty
CO3	Understand in depth tax provisions relating to Individuals, Firm, Company and Associations of Persons.
CO4	Understand the procedure of registration under Taxation
Or as designed in the curriculum	

Course Title: Financial Management -II

Course Code: ENF 310

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Identify the details of various sources of finance
CO2	Identify the characteristics of capital structure and factors affecting the capital Structure
CO3	Learn the characteristics of different methods of time value of money and its structure.
CO4	Learn the details of Capital Budgeting
Or as designed in the curriculum	

Course Title: Advanced Cost and Management Accounting

Course Code: ENF 320

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	<u>Understand the details of management accounting</u>
CO2	Learn in depth the details of financial statement analysis techniques
CO3	Analyze the inflow and outflow of cash and able to prepare cash flow statement
CO4	Understand the characteristics of different types of ratios
Or as designed in the curriculum	

Course Title: Organisational Behaviour

Course Code: ENF 330

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand in detail the behaviour of employees and able to manage them efficiently
CO2	Learn in depth and analyse the behaviour of employees
CO3	Identify in details employees performance and able to motivate for effective performance
CO4	Learn in details with examples frame policies and strategies in organisation
Or as designed in the curriculum	

JSS Mahavidyapeetha

JSS College of Arts, Commerce and Science

Ooty Road, Mysuru

Department: COMMERCE AND MANAGEMENT

Programme Name: BBA

Programme Code:

Session/Year 2019-20

List of POs & PSOs

POID	PO Statement – On successful completion of this Programme, students will be able to work in ;
PO1	Financial Analysts, Tax consultants, Tax Practitioners and Investment consultants
PO2	Financial and management accountants
PO3	Marketing Manager, Store manager, Purchase Manager and Sales Manager
P04	Human Resources Manager, Counsellor
P05	Retail Manager, Middle men and Customer relation manager

Course Title: Entrepreneurship Development

Course Code: CDF 210

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Learn in depth qualities of an entrepreneur and able to become an entrepreneur
CO2	Write down the details of financial schemes offered by banks and government agencies and able to access them easily
CO3	Learn the details of mobilization of resources
CO4	Learn in depth the characteristics of customer and able to identify the customer
Or as designed in the curriculum	

Course Title: Taxation - II

Course Code: CDF 230

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand the concept of Depreciation and rates of depreciation
CO2	Understand and identify the types of Capital Assets
CO3	Understand in detail the concept of Income from other Sources
CO4	Learn in depth the computation of Total Income and Tax Liability
Or as designed in the curriculum	

Course Title: Human Resource Management - III

Course Code: CDF274

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand and identify the objectives, principles, factors influencing wage and salary Administration
CO2	Understand the concept of wage policy in India
CO3	Learn in depth the objectives of fringe benefits.
CO4	Learn in depth the Methods of performance appraisal
Or as designed in the curriculum	

Course Title: Financial Management -III

Course Code: CDF 284

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand and identify the features, importance, contribution of financial service in promoting industry and service
CO2	Understand the concept of money market and capital market.
CO3	Learn in depth the Scope of merchant banking services
CO4	Learn in depth the growth of merchant banking in India
Or as designed in the curriculum	

Course Title: Financial Management -IV

Course Code: CDF 284

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand and identify the features, importance, contribution of financial service in promoting industry and service
CO2	Understand the concept of money market and capital market.
CO3	Learn in depth the Scope of merchant banking services
CO4	Learn in depth the growth of merchant banking in India
Or as designed in the curriculum	

Course Title: Human Resource Management-IV

Course Code: CDF 276

List of COs

CO ID	CO Statement - On successful completion of the course, the Students will be able to;
CO1	Understand and identify conditions necessary for employee empowerment
CO2	Understand the concept of Quality circles
CO3	Learn in depth the types of social Security
CO4	Understand and identify the measures to strengthen trade Union movement in India
Or as designed in the curriculum	

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Ooty Road, Mysuru - 570025
2019-20

Department: **Journalism**

Programme: **BA**

Programme Code: **BA25(CBCS)**

POID	PO
BA251	Acquire a functional knowledge of the underlying principles and recent emerging trends of the media industry.
BA252	Create a design emerging audio media production.
BA253	Conceptualize, create, design and strategies high-quality media content for various digital platforms.
BA254	Appreciate and demonstrate the ability to produce reliable outcome.
BA255	Demonstrate critical reading, writing and thinking skills.
BA256	Locate, evaluate, organize and incorporate information effectively.
BA257	Develop and carry out research project.
BA258	Demonstrate competence in Standard English Language and usage in documentation.

CO Attainment

Course Title: Introduction to Communication and Journalism

CO ID	CO
ELA270251	Become Freelance journalist.
ELA270252	To set up the commercial studio.
ELA270253	Become a armature photo journalist.
ELA270254	Stringer for several media houses.

Course Title: Media Industry and Management

CO ID	CO
ELC270251	Become a owner of the media house.
ELC270252	Become an Administrator of CEO
ELC270253	To set up the newspaper industry.

Course Title: Reporting and Editing Techniques

CO ID	CO
ELE270251	Prepare news copy
ELE270252	Specialize as fashion reporter
ELE270253	Prepare news copy and editing
ELE270254	Become Freelance journalist

Course Title: Indian Applied Journalism

CO ID	CO
ELE270741	Become news reporters and stringers.
ELE270742	Become circulation manager.
ELE270743	Become script writer.
ELE270744	Gain knowledge about the birth and growth of Indian Media Industry.

Course Title: Practice of Advertising and Public Relation

CO ID	CO
ELF270251	Setup advertising agency.
ELF270252	Prepare the advertising copy for print.
ELF270253	Become script writer-marketing research
ELF270254	Become PRO and event campaigner.

Course Title: Introduction to New Media

CO ID	CO
ELF270741	Become a video journalist
ELF270742	Become a cinema story writer
ELF270743	Become audio/video editor
ELF270744	Become digital content editor

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Ooty Road, Mysuru

Department: Physics
Programme Name: B.Sc
Session/Year: 2019-20
List of POs & PSOs

POID	PO Statement
PO1	Demonstrate proficiency in mathematics and the mathematical concepts needed for a proper understanding of physics
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Develop state of the art laboratory and professional communication skills
PO4	Apply the scientific method to design, execute and analyse an experiment

I SEM Mechanics	DMA29001	Learn the detail of Elasticity
	DMA29002	Understand the classification and characteristics of motion of a point particle
	DMA29003	Understand in detail with example frame of reference and relative motion
	DMA29004	Deliberate the classification and characteristics of Dynamic of particle in conservative field
III SEM Thermal Physics	DMC29001	Write down the classification and characteristics of laws of thermodynamics
	DMC29002	Have a clear understanding about reversible and irreversible process
	DMC29003	Understand the classification and characteristics of entropy and thermodynamic potential
	DMC29004	Specify in details with examples kinetic theory of gases
V SEM Solid State Physics	DME29201	Write down in detail with application of crystal structure
	DME29202	Write down the details of elementary lattice dynamics
	DME29203	Deliberate in detail with examples magnetic properties of matter
	DME29204	Identify the characteristics of elementary band theory
V SEM Renewable energy and Energy harvesting	DME29601	Understand the characteristics of fossil fuel
	DME29602	Learn in detail with application of wind energy
VI SEM Nuclear and particle physics	DMF29201	Write down in detail with application and properties of nuclei
	DMF29202	Learn in details with application and properties of nuclei
	DMF29203	Understand in detail with examples radioactivity

JSS College of Arts, Commerce and Science (Autonomous)
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2019-20

Department: Chemistry

Programme: B.Sc

Programme Code: DMA24001/ DMA24005/ DMA24008

I SEMESTER

Course title	CO ID	CO
ATOMIC STRUCTURE & ORGANIC CHEMISTRY	CO1	Learn the basics of atomic structure and periodicity functions, structures and properties of chemical compounds..
	CO2	Acquire knowledge on aromaticity and aliphatic hydrocarbons
	CO3	Learn the basics of stereochemistry
	CO4	Understand the methods of analysis related to volumetric estimations.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state – of – the –art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

CBZ and CZBt

PO ID	PO
PO1	Demonstrate the ability to justify, explain, and/or approach the concept both in written and oral forms
PO2	Demonstrate the ability to present clear, logical and succinct arguments
PO3	Develop state-of-the-art laboratory skills and professional communication skills.
PO4	Apply the scientific method to design, execute, and analyze an experiment.
PSO ID	PSO
PSO1	Find career opportunities and develop competence to write competitive examinations.
PSO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PSO3	Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.
PSO4	Create a hypothesis and appreciate how it relates to broader theories.
PSO5	Demonstrate skills in the use of Computers.

II SEMESTER

Course title	CO ID	CO
CHEMICAL ENERGETICS AND ORGANIC CHEMISTRY	CO1	Understand the concept of thermodynamics
	CO2	Learn the concept of ionic equilibria.
	CO3	Understand the mechanisms involved in functional Organic Chemistry..
	CO4	Study the applications of electrochemistry.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state-of-the-art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

CBZ and CZBt

PO ID	PO
PO1	Demonstrate the ability to justify, explain, and/or approach the concept both in written and oral forms
PO2	Demonstrate the ability to present clear, logical and succinct arguments
PO3	Develop state-of-the-art laboratory skills and professional communication skills.
PO4	Apply the scientific method to design, execute, and analyze an experiment.

PSO ID	PSO
PSO1	Find career opportunities and develop competence to write competitive examinations.
PSO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PSO3	Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.
PSO4	Create a hypothesis and appreciate how it relates to broader theories.
PSO5	Demonstrate skills in the use of Computers.

III SEMESTER

Course title	CO ID	CO
SOLUTIONS AND ORGANIC CHEMISTRY	CO1	Understand the concepts of electrochemistry.
	CO2	Study organometallic compounds.
	CO3	Learn the synthesis and reactions of amino acids, carbohydrates, alkaloids, vitamins, hormones and terpenes.
	CO4	Understand the qualitative organic analysis of organic compounds and enthalpy reactions

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state-of-the-art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

CBZ and CZBt

PO ID	PO
PO1	Demonstrate the ability to justify, explain, and/or approach the concept both in written and oral forms
PO2	Demonstrate the ability to present clear, logical and succinct arguments
PO3	Develop state-of-the-art laboratory skills and professional communication skills.
PO4	Apply the scientific method to design, execute, and analyze an experiment.

PSO ID	PSO
PSO1	Find career opportunities and develop competence to write competitive examinations.
PSO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PSO3	Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.
PSO4	Create a hypothesis and appreciate how it relates to broader theories.
PSO5	Demonstrate skills in the use of Computers.

IV SEMESTER

Course title	CO ID	CO
COORDINATION CHEMISTRY AND PHYSICAL CHEMISTRY	CO1	Know about co-ordination chemistry.
	CO2	Understand kinetic theory of gases, properties of liquids and crystallography.
	CO3	Acquire knowledge on the qualitative analysis of mixtures.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state-of-the-art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

CBZ and CZBt

PO ID	PO
PO1	Demonstrate the ability to justify, explain, and/or approach the concept both in written and oral forms
PO2	Demonstrate the ability to present clear, logical and succinct arguments
PO3	Develop state-of-the-art laboratory skills and professional communication skills.
PO4	Apply the scientific method to design, execute, and analyze an experiment.

PSO ID	PSO
PSO1	Find career opportunities and develop competence to write competitive examinations.
PSO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PSO3	Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.
PSO4	Create a hypothesis and appreciate how it relates to broader theories.
PSO5	Demonstrate skills in the use of Computers.

V SEMESTER

Course title	CO ID	CO
INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE	CO1	Understand the synthesis and applications of glass and ceramics, vitamins, hormones, soaps and detergents; and higher aspects of spectroscopy.
	CO2	Understand the types and manufacture of different fertilizers.
	CO3	Understand the different methods of prevention of corrosion.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state-of-the-art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemists/drugs

CBZ and CZBt

PO ID	PO
PO1	Demonstrate the ability to justify, explain, and/or approach the concept both in written and oral forms
PO2	Demonstrate the ability to present clear, logical and succinct arguments
PO3	Develop state-of-the-art laboratory skills and professional communication skills.
PO4	Apply the scientific method to design, execute, and analyze an experiment.

PSO ID	PSO
PSO1	Find career opportunities and develop competence to write competitive examinations.
PSO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PSO3	Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.
PSO4	Create a hypothesis and appreciate how it relates to broader theories.
PSO5	Demonstrate skills in the use of Computers.

SEC

Course title	Course ID	CO
FUEL CHEMISTRY		
		Understand soil sample for calcium and magnesium content.
		Understand water parameters.

Course title	PO ID	PO
FUEL CHEMISTRY	PO1	Apply the scientific method to design, execute, and analyze an experiment and also to explain their scientific procedures as well as their experimental observations.
	PO2	Appreciate the role of chemistry in the society.

VI SEMESTER PO ATTAINMENT

Course title	CO ID	CO
ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY	CO1	Understand the techniques involved in metallurgy.
	CO2	Understand the role of ions in different biological systems.
	CO3	Understand the applications of spectroscopy.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concept needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state-of-the-art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

PSO ID	PSO
PSO1	Find career opportunities and develop competence to write competitive examinations.
PSO2	Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.
PSO3	Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.
PSO4	Create a hypothesis and appreciate how it relates to broader theories.
PSO5	Demonstrate skills in the use of Computers.

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science (Autonomous)
Ooty Road, Mysuru - 570025

2019-20

Department: Mathematics

Programme: B.Sc

Programme Code: BScPCM01/BScPMCs02/BScPMcm03/BScPME04

I SEMESTER

Course title	CO ID	CO
Differential Calculus	CO1	Distinguish between the average rate of change and instantaneous rate of change.
	CO2	<i>Understand the concept in physics with the help of differential calculus.</i>
	CO3	Understand problem in chemistry, biology, electronics and business studies with a mathematical model.
	CO4	Understand the behavior of monotonic functions and curves.
	CO5	Find the approximate value of a function at a point using Taylor's formula.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state-of-the-art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemists/drugs

II SEMESTER

Course title	CO ID	CO
Differential Equations	CO1	Find the general solution and particular solution of a differential equation.
	CO2	<i>Distinguish between homogeneous and non homogeneous equations.</i>
	CO3	Understand integrating factors and exact equations.
	CO4	Distinguish between ordinary and partial differential equations.
	CO5	Understand the difference between linearly dependent and independent solutions.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state-of-the-art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemists/drugs

III SEMESTER

Course title	CO ID	CO
Real Analysis	CO1	Distinguish between a field and an ordered field
	CO2	<i>Study the behaviour of sequences.</i>
	CO3	Discuss the nature of infinite series.
	CO4	Understand the concept of least upper bound principle and its applications.
	CO5	Distinguish between pointwise and uniform convergence of sequence of functions

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state – of – the –art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

IV SEMESTER

Course title	CO ID	CO
Algebra	CO1	Understand the concept of groups.
	CO2	<i>Understand the concept of cyclic groups.</i>
	CO3	Understand normal subgroups and Quotient groups.
	CO4	Understand the symmetries of geometrical figures.
	CO5	Understand the concept of integral domains and fields.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state – of – the –art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

V SEMESTER

Course title	CO ID	CO
Linear Algebra	CO1	Understand the concept of vector space
	CO2	Understand Euclidian geometry with the help of real inner products.
	CO3	Understand the orthogonal projection
	CO4	Distinguish between linear and non- linear transformations
	CO5	Understand the importance of Matrices in the study of linear transformations..

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think , express and present in a clear, logical and succinct arguements
PO4	Develop state – of – the –art laboratory skills and professional communication skills
PO5	Use this has a basis for ethical behavior in issues facing chemist/drugs

VI SEMESTER

Course title	CO ID	CO
Complex Analysis	CO1	Understand the importance of complex numbers and their geometrical representation
	CO2	Find the equations of geometrical figures in complex form
	CO3	Distinguish between differentiability and analyticity of a function.
	CO4	Study the properties of various transformations.
	CO5	Understand the importance of conformal mappings.

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach
PO3	Demonstrate the ability to think, express and present in a clear, logical and succinct arguments
PO4	Develop state – of – the –art laboratory skills and professional communication skills
PO5	Use this as a basis for ethical behavior in issues facing chemist/drugs

VI SEMESTER

Course title	CO ID	CO
Vector calculus	CO1	Understand the concepts of differentiation and partial differentiation of a vector function.
	CO2	<i>Study the properties of vectors</i>

PO ID	PO
PO1	Demonstrate proficiency in Mathematics and the Mathematical concepts needed for a proper understanding of Physics.
PO2	Demonstrate the ability to justify and explain their thinking and/or approach

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science (Autonomous)
Ooty Road, Mysuru - 570025
2019-20

Department: Mathematics

Programme: BCA

I SEMESTER

Course title	CO ID	CO
Discrete Mathematics and Logic Computatio	CO1	To understand set and their applications
	CO2	<i>To study the basic concept in graph theory</i>
	CO3	To understand vectors and functions and to distinguish between them.
	CO4	To understand the difference between and open statement and mathematical statement.
	CO5	To study logic and its importance.
	CO6	To study Boolean algebraic and its applicatio

PO ID	PO
PO1	Get expected skills to be placed in Is sector and self-employment
PO2	To develop abilities for data analysis and interpretation using ICT
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.

V SEMESTER (CBCS)

Course title	CO ID	CO
Business Mathematics	CO1	Specify the characteristic of Matrices and determinants
	CO2	<i>Write down in details with examples</i> Matrices and determinants
	CO3	Deliberate the characteristics of algebra
	CO4	Learn the classification and characteristic of permutation and combination
	CO5	Deliberate in details with examples Mathematical induction

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science (Autonomous)
Ooty Road, Mysuru - 570025

2019-20

Department: BIOCHEMISTRY

Programme: B.Sc

Programme Code: BScBBM 07/ BScBMBt06

I SEMESTER

Course title	CO ID	CO
Fundamentals Of Chemistry And Molecules Of Life	CO1	Understand in detail with examples stereo-chemistry
	CO2	Specify the characteristics of carbohydrates & glycobiology
	CO3	Learn the characteristics of proteins
	CO4	Understand the classification and characteristics of vitamins

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

II SEMESTER

Course title	CO ID	CO
Physiology	CO1	Understand in depth cardiovascular physiology
	CO2	Specify the characteristics of renal physiology
	CO3	Deliberate the detail of musculoskeletal system
	CO4	Learn the detail of reproductive physiology

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

III SEMESTER

Course title	CO ID	CO
Enzymology & Bioenergetics	CO1	Learn the characteristics of enzyme kinetics
	CO2	Learn in depth enzyme inhibitions
	CO3	Specify in detail with examples enzyme activity
	CO4	Understand the classification and characteristics of bioenergetics

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

IV SEMESTER

Course title	CO ID	CO
Metabolism	CO1	Specify the detail of metabolism of lipids
	CO2	Understand the detail of metabolism of carbohydrates
	CO3	Deliberate the characteristics of metabolism of proteins
	CO4	Understand the detail of metabolism of nucleic acids

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems

PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

V SEMESTER

Course title	CO ID	CO
Nutritional Biochemistry	CO1	Understand the characteristics of energy metabolism
	CO2	Specify the characteristics of dietary carbohydrates
	CO3	Identify in detail with examples dietary lipid & health
	CO4	Understand the characteristics of minerals

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

V SEMESTER

Course title	CO ID	CO
Tools and Techniques in biochemistry	CO1	Learn the detail of chromatography
	CO2	Understand the electrophoresis
	CO3	Specify the detail of centrifugation
	CO4	Learn the detail of spectroscopy

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

VI SEMESTER

Course title	CO ID	CO
Plant biochemistry	CO1	Learn the detail of Nitrogen Metabolism
	CO2	Specify the characteristics of membranes
	CO3	Specify the detail of secondary metabolites
	CO4	Understand the Concepts of photosynthesis

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

Department: BIOTECHNOLOGY (UG)

Programme Name: BSc

Programme Code: BSC05/BSC06

Session/Year: 2019-20

List of POs & PSOs

POID	PO Statement
PO1	Develop state-of-the-art laboratory skills and professional communications skills.
PO2	Apply the scientific method to design, execute, and analyze an experiment.
PO3	Explain the theoretical basis of the tools, technologies and methods common in Life science.
PO4	Design and develop solution to biotechnology problems by applying appropriate tools while keeping in mind safety for environment and society.
PSO1	Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries
PSO2	Demonstrate effectively the applications of biochemical and biological sciences.
PSO3	Know and apply appropriate tools and techniques in biotechnological manipulation
PSO4	Understand his or her responsibilities in biotechnological practices.

Course Title: CELL BIOLOGY & GENETICS

Course Code: DMA220

List of COs

CO ID	CO Statement
CO1	Develop an understanding of the structure and functions of organelles.
CO2	Understand the structure of chromosomes, types, cell differentiation and features of cancer cells.
CO3	Gain comprehensive understanding of the chemical basis of heredity and methods.
CO4	Understand the effect of mutation, mechanism and Chromosomal Aberrations.

Course Title: BIOMOLECULES&BIO-ANALYTICALTECHNIQUES Course Code:DMB220

CO ID	CO Statement
CO1	Understandtheproperties,mechanismsandbiologicalimportanceofBio-molecules.
CO2	Comphrendthemechanismofenzymeaction,factorsaffectingitanditsapplications.
CO3	UnderstandandabletorelatetheprinciplesunderlyingvariousinstrumentsinthefieldofBiology.
CO4	Compareandcontrasttheroleofbio-moleculesandenzymes.

List of COs

Course Title: MOLECULARBIOLOGY&GENETICENGINEERING Course Code:DMC220

List of COs

CO ID	CO Statement
CO1	Display a broad understanding of core molecular Biology.
CO2	Discuss and differentiate the process of Transcription and Translation
CO3	Explainkeyconceptsofgenomeorganizationandmanipulation.
CO4	Demonstrateworkingknowledgeinadefinedskillset ofmolecularbiologyandbiotechnologyprotocols.

Course Title: PLANTTISSUE&ANIMALCELLCULTURE

Course Code:DMD220

List of COs

CO ID	CO Statement
CO1	Develop concept of plant tissue and animal cellculture techniques and their application inbiotechnology.
CO2	Comprehendtheknowledgeoftransgenicplantsinindustrialandagricultural applications.
CO3	Establishandmaintainvariouscelllinesusedintissueculture.
CO4	Understand the application of animal cell culture in biopharmaceutical industry.

Course Title: IMMUNOLOGY&MEDICALBIOTECHNOLOGY

Course Code:DME220

List of COs

CO ID	CO Statement
CO1	Understand the role of different types of Cells in immune system .
CO2	Discusstheprinciplesandapplicationsofimmunologicaltechniques.
CO3	Understandto diagnosediseases.
CO4	Comprehendtheknowledgeoftherapeuticapplicationsofenzymeandhormone.

Course Title: MICROBIALTECHNIQUES**Course Code:**DME222

List of COs

CO ID	CO Statement
CO1	Understand structure, classification and reproduction in micro-organisms.
CO2	Know andapply appropriate sterilizationtechniquesinbiotechnology.
CO3	Discussthevarious culture media and its components used in culturing microbes.
CO4	Comprehendtheknowledgeof staining technique.

Course Title: ENVIRONMENTALBIOTECHNOLOGY&BIOSTATISTICS

Course Code:DMF220

CO ID	CO Statement
CO1	Gainanunderstandingofthecauses,typesandcontrolmethodsforEnvironmentalPollution.
CO2	DifferentiatetheapplicationofdifferentlifeformsinEnvironmentalRemediation.
CO3	ApplyStatisticalToolsforAnalysisofBiologicalData.
CO4	ApplyStatisticalToolsfor calculation of standard deviation

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru – 570 025, Karnataka, India
2019-20

Name of the Department: Botany UG

Programmes offered: B.Sc. (CBZ & BBM)

Programme Outcome for Bachelor of Science in Chemistry, Botany & Zoology

PO/PSO Id/No.	PO/PSO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills. Work as a laboratory technician, biochemists or medical scientist
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

Programme Outcome for Bachelor of Science in Botany, Biochemistry & Microbiology

PO/PSO Id/No.	PO/PSO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills. Work as a laboratory technician, biochemists or medical scientist
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

Sl. No.	Course	COID	
1.	Biodiversity of Microbes and Archegoniate	DMA2300701	Understand the characteristics of viruses
		DMA2300702	Learn the classification and characteristics of bacteria
		DMA2300703	Understand the classification and characteristics of fungi
		DMA2300704	Identify the classification and characteristics of archegoniate
2.	Plant Ecology, Morphology and Taxonomy	DMB2300701	Learn the classification and characteristics of plant communities
		DMB2300702	Understand in depth herbarium
		DMB2300703	Understand in details with examples plant morphology
		DMB2300704	Specify the characteristics of ecosystem
3.	Plant Anatomy and Embryology	DMC2300701	Understand the details of histology
		DMC2300702	Learn the details of embryology
		DMC2300703	Understand the details of anatomy
		DMC2300704	Learn in depth translocation in phloem
4.	Plant Physiology and Metabolism	DMD2300701	Understand the details of photosynthesis
		DMD2300702	
		DMD2300703	Specify the classification and characteristics of enzyme
		DMD2300704	
5.	Cell and Molecular Biology	DME2300701	Understand in depth microscopy
		DME2300702	Learn the details of cell
		DME2300703	Specify the details of DNA
		DME2300704	Learn the details of gene regulation

6.	Floriculture	DME2360701	Specify the classification and characteristics of gardening
		DME2360702	Understand in depth nursery management
		DME2360703	Identify in details with examples ornamental plants
7.	Genetics and Plant Breeding	DMF2300701	Specify the details of heredity
		DMF2300702	Write down the classification and characteristics of mutations
		DMF2300702	Learn the details of plant breeding
		DMF2300703	Identify in details with examples linkage

Programme Outcome for Bachelor of Science in Botany, Biochemistry & Microbiology

Sl. No.	Course	COID	
1.	Biodiversity of Microbes and Archegoniate	DMA2300801	Understand the characteristics of viruses
		DMA2300802	Learn the classification and characteristics of bacteria
		DMA2300803	Understand the classification and characteristics of fungi
		DMA2300804	Identify the classification and characteristics of archegoniate
2.	Plant Ecology, Morphology and Taxonomy	DMB2300801	Learn the classification and characteristics of plant communities
		DMB2300802	Understand in depth herbarium
		DMB2300803	Understand in details with examples plant morphology
		DMB2300804	Specify the characteristics of ecosystem
3.		DMC2300801	Understand the details of histology

	Plant Anatomy and Embryology	DMC2300802	Learn the details of embryology
		DMC2300803	Understand the details of anatomy
		DMC2300804	Learn in depth translocation in phloem
4.	Plant Physiology and Metabolism	DMD2300801	Understand the details of photosynthesis
		DMD2300802	
		DMD2300803	Specify the classification and characteristics of enzyme
		DMD2300804	
5.	Cell and Molecular Biology	DME2300801	Understand in depth microscopy
		DME2300802	Learn the details of cell
		DME2300803	Specify the details of DNA
		DME2300804	Learn the details of gene regulation
6.	Floriculture	DME2360801	Specify the classification and characteristics of gardening
		DME2360802	Understand in depth nursery management
		DME2360803	Identify in details with examples ornamental plants
7.	Genetics and Plant Breeding	DMF2300801	Specify the details of heredity
		DMF2300802	Write down the classification and characteristics of mutations
		DMF2300802	Learn the details of plant breeding
		DMF2300803	Identify in details with examples linkage

JSS College of Arts, Commerce and Science

Ooty Road, Mysuru

Department: Microbiology

Programme Name: B.Sc(BMBt & BBM)

Programme Code: BSc06 & BSc07

Session/Year: 2019-20

List of POs

POID	PO Statement
PO1	Demonstrate the ability to justify and explain their thinking and/or approach, both written and oral. Demonstrate the ability to present clear, logical and succinct arguments, including prose and mathematical language. Write and speak using professional norms, and demonstrate an ability to collaborate effectively.
PO2	Develop state-of-the-art laboratory skills and professional communication skills.
PO3	Apply the scientific method to design, execute, and analyze an experiment and also to explain their scientific procedures as well as their experimental observations.
PO4	Demonstrate an understanding of fundamental biochemical principles, structure and biological function of biomolecules, metabolic pathways and their regulation.
PO5	Work as a laboratory technician, biochemists or medical scientist
PO6	Possess knowledge of ethical practices in science.
PO7	Describe/ explain the processes used by microorganisms for their replication, survival, and interaction with their environment and host populations.
PO8	Explain the theoretical basis of the tools, technologies and methods common to microbiology.
PO9	Apply the scientific method as a demonstration that they understand its application furthering our knowledge of the microbial world.
PO10	Design and develop solution to Biotechnology problems by applying appropriate tools while keeping in mind safety factor for environmental & society.
PO11	Create, select, and apply appropriate techniques, resources, and modern tools including prediction and modelling to different activities with an understanding of the limitations.
PO12	Support biotechnology research activity with strong technical background knowledge.

Course Title: INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY**Course Code: DMA28006 & 28007****List of CO**

CO ID	CO Statement
CO1	Gain basic knowledge about Microbiology starting from history to microorganisms. Gain basic knowledge about Microbiology starting from history to Microorganisms
CO2	Learn about the taxonomical classification of Microbes.
CO3	Understand the basic microbial structure, function and study of the comparative characteristics of prokaryotes and eukaryotes
CO4	Understand the structural similarities and differences among various physiological groups of fungi, protozoa and algae
CO5	Know how viruses are classified and understand the structure of viruses and the replication strategies of representative viruses

Course Title: BACTERIOLOGY**Course Code: DMB28006 & 28007****List of CO**

CO ID	CO Statement
CO1	Bacteria, microscopes and basic laboratory techniques.
CO2	Demonstrate theory and practical skills in microscopy, their handling techniques and staining procedures.
CO3	Various Culture media and their applications and also understand various physical and chemical means of sterilization.
CO4	Know about microbial techniques for isolation of pure cultures of bacteria. staining and cultural characteristics & maintenance and preservation of cultures

Course Title: MICROBIAL PHYSIOLOGY AND METABOLISM**Course Code: DMC28006 & 28007****List of Cos**

CO ID	CO Statement
CO1	Inculcate the knowledge regarding microbial growth, functions, physiology and metabolism.
CO2	Understand the microbial transport systems and microbial metabolism
CO3	Know the microbial growth in response to environmental factors.
CO4	Get equipped with various methods of bacterial growth measurement
CO5	Knowledge of properties, structure, function of enzymes, enzyme kinetics and their regulation

Course Title: MICROBIAL GENETICS AND GENETIC ENGINEERING**Course Code: DMD28006 & 28007****List of CO**

CO ID	CO Statement
CO1	Genetics of microorganisms and also about recombinant DNA technology used in microbiological research
CO2	Understand about techniques in genetic engineering
CO3	Social and ethical issues concerning genetic engineering
CO4	Applications of genetic engineering in various fields

Course Title: ENVIRONMENTAL SCIENCE**Course Code: DME28006 & 28007****List of CO**

CO ID	CO Statement
CO1	The role of microorganisms in soil, air, water, waste water and bioremediation.
CO2	Know about the diversity of microorganism and microbial communities inhabiting a wide range of ecological habitats.
CO3	Learn the occurrence, abundance and distribution of microorganisms in the environment and their role in the environment
CO4	Understand various biogeochemical cycles – Carbon, Nitrogen, Phosphorus cycles etc. and microbes involved in these cycles.
CO5	Understand various plant microbes interactions especially rhizosphere, phyllosphere and mycorrhizae and their applications especially the biofertilizers and their mass production.
CO6	The various methods to determine the Sanitary quality of water and sewage Treatment methods employed in waste water treatment

Course Title: INDUSTRIAL, FOOD AND MEDICAL MICROBIOLOGY**Course Code: DMF28006 & 28007****List of CO**

CO ID	CO Statement
CO1	Understand food related microorganisms, their contamination, spoilage and preservation .
CO2	Understand the beneficial role of microorganisms in fermented dairy products
CO3	UUnderstand how microbiology is applied in manufacture of industrial products
CO4	The underlying principles in downstream processing
CO5	Know the human immune response towards microbes, Know the relationship between microorganism and human disease, pathogenicity, Laboratory diagnosis, treatment and prophylaxis Demonstrate an understanding of key concepts in immunology

Course Title: MICROBIAL DIAGNOSIS IN HEALTH CLINICS**Course Code: DMF28206 & 28207****List of CO**

CO ID	CO Statement
CO1	Gain experience in health clinics such as examination, collection of clinical samples and diagnosis
CO2	Demonstrate scientific quantitative skills, the ability to evaluate experimental design, read graphs.

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Department: **UG Department of English**

Programme: **BA**

PO Attainment

(CBCS)

POID	PO
PO1	Students should be familiar with representative literary and cultural texts within a significant number of historical, geographical, and cultural contexts.
PO2	Students should be able to apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres
PO3	Students should be able to identify, analyze, interpret and describe the critical ideas, values and themes that appear in literary and cultural texts and understand the way these ideas, values and themes inform and impact culture and society, both now and in the past.
PO4	Students should be able to write analytically in a variety of formats, including essays, research papers, reflective writing, and critical reviews of secondary sources.
PO5	Students should be able to ethically gather, understand, evaluate and synthesize information from a variety of written and electronic sources.
PO6	Students should be able to understand the process of communicating and interpreting human experiences through literary representation using historical contexts and disciplinary methodologies.

CO Attainment

CBSC Papers

Course Code:ELA22224

Course Title: Poetry, Drama and Essays

CO ID	CO
CO1	Know the history of English literature in the chronological order
CO2	Enjoy the literary forms such as novel, poem, play, and essay.
CO3	Critically understand the literature
CO4	Emotionally develop students mind.
CO5	Understand the culture in that particular period of time
CO6	Enhance narrative capacity and be rational and decisive in his approach to life.

Course Code:ELB22224

Course Title: Poetry, Fiction & Essays

CO ID	CO
CO1	Understand the language, culture and pattern of writing of the 18 th Century writers.
CO2	Enjoy the literary forms such as novel, poem, and essay.
CO3	Critically analyse the literature
CO4	Understand the relation between literature and real life.
CO5	Connect, compare and contrast the life of fantasy and fact.
CO6	Distinguish the human qualities

Course Code:ELC22224

Course Title: Poetry, Drama and Fiction

CO ID	CO
CO1	Apply theoretical knowledge into life effectively.
CO2	Reminiscence certain literary descriptions and look at life with another perspective.
CO3	Critical understanding of literature
CO4	Relation between literature and real life.
CO5	Understand the culture and tradition prevailed in the 19 th Century
CO6	Connect, compare and contrast the life of fantasy and fact.

Course Code:ELD22224

Course Title: Poetry, Fiction & Prose

CO ID	CO
CO1	Understand the culture and tradition prevailed in 20 th Century
CO2	Enhance the narrative capacity and be rational and decisive in his approach to life
CO3	Re-relate historical events in a more apprehensive language.
CO4	Relation between literature and real life.
CO5	Learn and lead a life filled with humanitarian concern.

Course Code: ELE22224, 22 Course Title: Modern Literature

CO ID	CO
CO1	Have better understanding of life.
CO2	Develop analytical and critical quality.
CO3	Be creative in his day to day life and face the problems
CO4	Relation between literature and real life.
CO5	Compare and contrast the historical and modern works

Course Code:ELF22224, 225

Course Title: English Writing in Third World Countries

CO1	Understand the problems the of third world countries
CO2	Know the rift between colonised and coloniser
CO3	Understand the spirit of independence and limitations of freedom.
CO4	Get the knowledge of pre and post independent socio-political and economic aspects of India.
CO5	Develop critical and rational thinking.

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Department: Hindi

Programme: BA

PO ID	PO (BA)
PO 1	Understand culture and heritage
PO 2	Manage business affairs
PO 3	Create interest in literature
PO 4	Report and edit public events effectively
PO 5	Develop reading writing communication and reasoning skills

Programme Code: ELA 050 (21 to 25)

Course title :Hindi GadyaaurVyakarna

Paper 1

CO ID	CO
CO 1	1 . Identify in details with examples kahani of 20th century
CO 2	2. Write down in depth kahani of 20th century
CO 3	3. Deliberate in depth kahani of 20th century
CO 4	4. Specify the classification and characteristics of Hindi vyakaran
CO 5	5. Identify the characteristics of Hindi vyakaran

Programme Code: ELB 050 (21 to 25)

Course title :**Hindi KahaniaurVyakarna**

Paper 2

CO ID	CO
CO 1	1. Write down the details of short stores of 20 th century
CO 2	2 Identify in depth short stores of 20 th century
CO 3	3. Identify in details with application, if applicable, short stores of 20 th century
CO 4	4. Identify the classification and characteristics of Hindi vyakaran
CO 5	5. Write down the characteristics of Hindi vyakaran

Programme Code: ELC 050 (21 to 25)

Course title:**Hindi NatakaaurVanjya Hindi**

Paper 3

CO ID	CO
CO 1	1. Understand the characteristics of Hindi Natak
CO 2	2 . Deliberate in details with application, if applicable, Hindi Natak - deep daan by Ramkumarvarma
CO 3	3. Deliberate the characteristics of Hindi Natak -Red kehaddi by Jagadeshachandramathur
CO 4	4. Understand the details of Hindi Natak -sukhe dale by Upendranathashka
CO 5	5. Write down in details with examples Hindi Natak -mai bee manavhu by Vishnu prabakar
CO6	6. Identify the details of Hindi Vanijya Hindi
CO7	7. Specify in depth Vanijya Hindi

Programme Code: ELD 050 (21 to 25)

Course title :Hindi KavyaaurAnuvadaParibhashikShabdavali

Paper 4

CO ID	CO
CO 1	1. Write down the classification and characteristics of medieval and madran Hindi Kavya
CO 2	2. Deliberate in details with application, if applicable, medieval - saakhi by Kaber
CO 3	3. Specify in details with examples Hemala by RamadhareSimhaDinakar
CO 4	4.Specify in details with application, if applicable, Gurukul by RamkumarVarma
CO 5	5.Specify the characteristics of Hindi AnuvadaParibhasikShabdavali
Co6	6 . Learn in details with examples Hindi AnuvadaParibhasikShabdavali

Department: Hindi

Programme: BCOM

PO ID	PO (BCOM) (11)
PO 1	Motivated for their higher education
PO 2	Write resume, letter of application and business letters
PO 3	Improve Spoken and written communication

Programme Code: ENA050

Course title :Hindi KahaniaurVyakarna

Paper 1

CO ID	CO
CO 1	1.Deliberate in details with application, if applicable, short stores of 20 th century
CO 2	2. Deliberate in details with application, if applicable, Bade bhaheSahab by Premchand
CO 3	3. Understand the classification and characteristics of Akasha deep by JayashankarPrasada
CO 4	4. Understand in details with application, if applicable, Hindi vyakaran
CO 5	5. Learn the details of Hindi vyakaran
CO 6	6. Specify in details with application, if applicable, Hindi vyakaran

Programme Code: ENB050

Course title :Hindi GadyaaurVyakarna

Paper 2

CO ID	CO
CO 1	1 .Specify in details with application, if applicable, Hindi vyakaran
CO 2	2 .Understand the details of Prose of 20th cenyury
CO 3	3 .Learn in details with application, if applicable, Prose of 20th cenyury
CO 4	4 .Identify the classification and characteristics of Hindi vyakaran
CO 5	5 .Deliberate the details of Hindi vyakaran
CO 6	6 .Understand in details with application, if applicable, Hindi vyakaran

Programme Code: ENC050

Course title : Hindi KavyaaurAnuvadaParibhashikShabdavali

Paper 3

CO ID	CO
CO 1	1 .Deliberate the classification and characteristics of medieval and modern hindikavya
CO 2	2 .Deliberate the characteristics of medieval and modern hindikavya
CO 3	3 .Understand the details of Kaber by saakhe

CO 4	4 . Identify the characteristics of Hemala by ramadharesimhadinakar, Hindi SarkariPatrachar
CO 5	Co5 . Learn in depth preyatham by suryakantathreepatinirala
CO 6	Co6 . Understand the characteristics of Hindi Anuvada
Co7	7 . Understand in depth Hindi Anuvada
Co8	8 . Identify in details with examples Hindi Anuvada

Programme Code: END050

Course title: Hindi UpanyasTathaVanijya Hindi

Paper 4

CO ID	CO
CO 1	1.. Learn in details with examples Novel-Gaban by Premchand
CO 2	2 .Understand in details with examples Novel-Gaban by Premchand
CO 3	3.Understand the details of Novel-Gaban by Premchand
CO 4	4.Identify the classification and characteristics of VanijyaHindi
CO 5	5.Learn the classification and characteristics of Vanijya Hindi
CO 6	6.Identify in details with application, if applicable, Vanijya Hindi

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Department: Hindi

Programme: BSC

PO ID	PO (BSA) (DMA-01 to 08)
PO 1	Inculcate human values
PO 2	Avail job opportunities in translation
PO 3	Create interest in literature

Programme Code: DMA050 (DMA – 01 to 08)

Course title :Hindi GadyaaurVyakarna

Paper 1

CO ID	CO
CO 1	1 . Identify in details with examples kahani of 20th century
CO 2	2. Write down in depth kahani of 20th century
CO 3	3. Deliberate in depth kahani of 20th century
CO 4	4. Specify the classification and characteristics of Hindi vykaran
CO 5	5. Identify the characteristics of Hindi vykaran

Programme Code: DMB 050 (DMB – 01 to 08)

Course title :Hindi KahaniaurVyakarna

Paper 2

CO ID	CO
CO 1	1. Write down the details of short stores of 20 th century
CO 2	2 Identify in depth short stores of 20 th century
CO 3	3. Identify in details with application, if applicable, short stores of 20 th century
CO 4	4. Identify the classification and characteristics of Hindi vyakaran
CO 5	5. Write down the characteristics of Hindi vyakaran

Programme Code: DMC 050 (DMC – 0501 to 08)

Course title:Hindi NatakaaurVanjya Hindi

Paper 3

CO 1	1. Understand the characteristics of Hindi Natak
CO 2	2 . Deliberate in details with application, if applicable, Hindi Natak -deep daan by Ramkumarvarma
CO 3	3. Deliberate the characteristics of Hindi Natak -Red kehaddi by Jagadeshachandramathur
CO 4	4. Understand the details of Hindi Natak - sukhe dale by Upendranathashka

CO 5	5. Write down in details with examples Hindi Natak -mai bee manavhu by Vishnu prabakar
CO6	6. Identify the details of Hindi Vanijya Hindi
CO7	7. Specify in depth Vanijya Hindi

Programme Code: DMD 050 (DMD – 0501 to 08)

Course title : **Hindi KavyaaurAnuvadaParibhashikShabdavali**

Paper 4

CO ID	CO
CO 1	1. Write down the classification and characteristics of medieval and madran Hindi Kavya
CO 2	2. Deliberate in details with application, if applicable, medieval - saakhi by Kaber
CO 3	3. Specify in details with examples Hemala by RamadhareSimhaDinakar
CO 4	4. Specify in details with application, if applicable, Gurukul by RamkumarVarma
CO 5	5. Specify the characteristics of Hindi AnuvadaParibhasikShabdavali
Co6	6 . Learn in details with examples Hindi AnuvadaParibhasikShabdavali

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Department: **KANNADA**

Programme: **BA Programmer**

Programme Code: **BA23(CBCS)**

POID	PO
BA231	DEVELOP HUMAN VALUES & A SENSE OF SOCIAL SERVICE
BA232	BECOME A RESPONSIBLE & DUTIFUL CITIZEN
BA233	ABLE TO ENHANCE CRITICAL TEMPER & CREATIVE ABILITY
BA234	UNDERSTAND & APPRECIATE RELATIONSHIP BETWEEN MAN AND ENVIRONMENT
BA235	TO READ & INTERPRIT ,GENERATE MAPS AND OTHER GEOGRAPHIC REPRESENTATIONS
BA236	UNDERSTAND PHYSICAL- GEOGRAPHIC PROCESS, THE GLOBAL DISTRIBUTION OF LANDFORMS AND ECOSYSTEMS
BA237	ROLE OF THE PHYSICAL ENVIRONMENT ON HUMAN POPULATION

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Department: Computer Science

Programme Name: BCA

Programme Code: ECE23001

Session/Year v sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.
PSO05	Information about computer, technology, organization and management.

PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: Analysis and Design of Algorithms
Name of Course In-charge/Coordinator:

Course Code: ECE23001

List of COs

CO ID	CO Statement
CO1	Learn the details of Types of notion of Algorithm
CO2	Learn in details with examples Algorithm Design Techniques
CO3	Deliberate in depth Sorting Techniques
CO4	Deliberate in depth of Searching Techniques
CO5	Identify in details with examples Analysis of Graph Algorithms
CO6	Learn the details of Dynamic Programming Methods
Or as designed in the curriculum	

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Department: Computer Science

Programme Name: BCA

Programme Code: ECE22001

Session/Year v sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.
PSO05	Information about computer, technology, organization and management.

PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: ASP.Net

Course Code: ECE22001

Name of Course In-charge/Coordinator:

List of COs

CO ID	CO Statement
CO1	Learn the details of ASP.NET Framework
CO2	Learn the details of ASP.NET working Environment
CO3	Deliberate in details with examples Standard Control of ASP.NET
CO4	Understand the details of Developing Simple Websites Using ASP.NET Controls
CO5	Deliberate in depth Developing Simple Web Application Using ASP.NET Controls
CO6	Learn the details of Database Access Controls
Or as designed in the curriculum	

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Department: Computer Science

Programme Name: BCA

Programme Code: ECA21001

Session/Year I sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.

PSO05	Information about computer, technology, organization and management.
PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: Computer Fundamentals & MIS

Course Code: ECA21001

Name of Course In-charge/Coordinator:

List of COs

CO ID	CO Statement
CO1	Deliberate the details of computer system
CO2	Learn the classification and characteristics of computer system
CO3	Understand in details with examples software
CO4	Identify the characteristics of devices
CO5	Learn the classification and characteristics of software
CO6	Understand the classification and characteristics of Memory units
Or as designed in the curriculum	

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Department: Computer Science

Programme Name: BCA

Programme Code: ECE21001

Session/Year I sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.
PSO05	Information about computer, technology, organization and management.

PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: Data Communication and Computer Networks

Course Code: ECE21001

Name of Course In-charge/Coordinator:

List of COs

CO ID	CO Statement
CO1	Learn in depth Elements of Data Communications and network Systems
CO2	Learn in depth Transmission Media
CO3	Understanding the various classifications and characteristics of Signals
CO4	Understand in details with examples Network Models
CO5	Learn in depth Error Detection and Corrections Algorithms
CO6	Deliberate in details with examples Switching Concepts
Or as designed in the curriculum	

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Department: Computer Science

Programme Name: BCA

Programme Code: ECC22001

Session/Year I sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.
PSO05	Information about computer, technology, organization and management.

PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: DBMS

Course Code: ECC22001

Name of Course In-charge/Coordinator:

List of COs

CO ID	CO Statement
CO1	Understand the characteristics of DBMS with examples
CO2	Deliberate the details of types of database languages with examples
CO3	Learn the details of ER- Diagrams and Relationship
CO4	Understand in depth Basic concepts of Relational Model
CO5	Learn in details with examples MYSQL Commands
CO6	Learn in details with examples in PL-SQL
Or as designed in the curriculum	

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Department: Computer Science

Programme Name: BCA

Programme Code: ECC22001

Session/Year III sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.
PSO05	Information about computer, technology, organization and management.

PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: JAVA

Course Code: ECC21001

Name of Course In-charge/Coordinator:

List of COs

CO ID	CO Statement
CO1	Deliberate in details with examples Boolean algebra and logic circuits
CO2	Learn the details of Data Representation and Computer Arithmetic
CO3	. Learn in depth Computer Organization and Design
CO4	. Learn the details of architecture of CPU
CO5	Deliberate the classification and characteristics of Basic Computer Programming Concepts
CO6	Write down in depth Basic Computer Programming Concepts
Or as designed in the curriculum	

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JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: Computer Science

Programme Name: BCA

Programme Code: ECA23001

Session/Year I sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.
PSO05	Information about computer, technology, organization and management.

PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: Object Oriented Programming in C++

Course Code: ECA23001

List of COs

CO ID	CO Statement
CO1	Deliberate the classification and characteristics of Basic of Problem Solving Techniques
CO2	Understand the details of Basic of Problem Solving Techniques
CO3	Learn in depth Basic concepts of OOPs and C++ Programming Language
CO4	Deliberate the details of Control Structures & Arrays in C++
CO5	Deliberate the details of Functions in C++
CO6	Learn the details of strings & pointers in C++
Or as designed in the curriculum	

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: Computer Science

Programme Name: BCA

Programme Code: ECC23001

Session/Year III sem 19/20

List of POs & PSOs

PO/PSO ID	PO/PSO
PO1	Get expected skills to be placed in IT sector and self-employment.
PO2	To develop abilities for data analysis and interpretation using ICT.
PO3	Acquire comprehensive knowledge with equal emphasis on theory and practice.
PO4	Analyze and apply latest technologies to solve problems in the areas of computer applications.
PO5	Develop the basic programming skills to enable students to build Utility tools.
PO6	Get the foundation knowledge for higher studies in the field of Computer Application.
PO7	Analyze and synthesis computing systems through quantitative and qualitative techniques
PO8	Develop practical skills to provide solutions to industry, society and business.
PO9	Work effectively both as an individual and a team leader on multidisciplinary projects.
PO10	Improves communication skills so that they can effectively present technical information in oral and written reports
PSO01	Knowledge of contemporary and emerging issues in computer science
PSO02	Ability to identify, critically analyse, formulate and develop computer application
PSO03	Learn techniques, skills and modern hardware and software tools necessary for innovative software solutions
PSO04	Devise and conduct experiments, interpret data and provide well informed conclusions.
PSO05	Information about computer, technology, organization and management.

PSO06	Know various computer applications and latest development in IT and communication system.
PSO07	Act as software programmer, system and Database administrator, web designer, faculty for computer science and computer applications.
PSO08	Design and conduct experiments, analyze and interpret data.

Course Title: Web technology

Course Code: ECC23001

List of COs

CO ID	CO Statement
CO1	Learn the details of HTML tags
CO2	Understand the details of Basic CSS and implements
CO3	Understand the details of Basic Concepts of Java Scripts
CO4	. Write down in details with application and Usage of Java scripts
CO5	Understand in details with examples Document object Model
CO6	Deliberate in depth Basic of XML
Or as designed in the curriculum	

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru – 570 025, Karnataka, India

2019-20

Name of the Department: PG Department of Biotechnology

Programmes offered: M.Sc. in Biotechnology

COURSE	COURSE CODE	COID	CO'S
BIOMOLECULES AND BIOENERGETICS	BTA040	CO1	Study of different biomolecules
		CO2	Metabolism and their regulation
		CO3	Enzymes and their role in metabolism
		CO4	Application of thermodynamics to understand the basic concepts of life.
		CO5	To study the integrated metabolism of all the biomolecules.
BIOANALYTICAL TECHNIQUES	BTA050	CO1	To understand the separation of molecules by different chromatography, centrifugation and electrophoretic techniques
		CO2	Analysis and characterization of molecules by spectroscopy techniques
		CO3	Use of radioactive material in understanding metabolic pathways
		CO4	To study the imaging techniques to explore the basics of cell
LAB – I	BTA060	CO1	Course objective is to introduce the students to the fundamental experiments in the field of Biochemistry, Microbiology and Genetics.
		CO2	Students get the insight to operate simple equipment's like colorimeter and spectrophotometer
		CO3	Identification of microorganisms by morphology and staining techniques and study of growth kinetics.
		CO4	In genetics students are exposed to know about culture and maintenance of <i>Drosophila</i>

			<i>melanogaster</i> (model organism), Study of mutants, salivary gland chromosome and karyotyping techniques.
		CO5	To understand the different enzyme kinetics.
MOLECULAR GENETICS	BTA230	CO1	To understand the molecular mechanism of inheritance
		CO2	Mutation and DNA repair mechanism
		CO3	Genemapping and study of chromosomal abnormalities
		CO4	Phylogenetics and micro-evolution
		CO5	Development of an organism
MICROBIOLOGY	BTA240	CO1	To understand the microbial taxonomy
		CO2	Handling, preservation and sterilization of microbes
		CO3	Microbial interactions with different hosts
		CO4	-Application of microorganisms in the field of agriculture, environment and health sciences
MOLECULAR BIOLOGY	BTB020	CO1	The student will get an idea about the genomic organization of prokaryotes and eukaryotes.
		CO2	To obtain in depth knowledge of genetic code, DNA replication and transcription.
		CO3	Understand principles, concepts of translation, post translation mechanism
		CO4	Regulation of gene expression in prokaryotes and eukaryotes
		CO5	Gain the insight into molecular mechanism of antisense molecules, inhibition of splicing and application of antisense and ribozyme technologies
IMMUNOLOGY AND IMMUNOTECHNOLOGY	BTB050	CO1	Study basic concepts of immunology
		CO2	MHC and their role in transplantation
		CO3	Cytokines and their role in immune system, Tumor Immunology
		CO4	Autoimmune diseases , causes and treatment

		CO5	Hypersensitivity, Vaccine production
LAB – II	BTB060	CO1	Students are trained to get the skills in the field of Molecular biology and Genetic engineering
		CO2	Isolation and purification of nucleic acids and their quantification
		CO3	Study of antigen and antibody interactions
		CO4	Preparation of wine and analysis of food samples
		CO5	Visit to Bio-tech Industries
CELL SIGNALLING AND COMMUNICA TION	BTB220	CO1	Understanding the multi-cellularity of organisms
		CO2	role of extracellular matrix in signalling
		CO3	various signalling pathways from the cell surface to the nucleus
		CO4	cell signalling in plants
		CO5	microbe-plant and insect-plant interaction.
FOOD AND ENVIRONME NTAL BIOTECHNOL OGY	BTB210	CO1	Comprehensive insight into the fermented foods and enzymes in food industry
		CO2	Obtain knowledge of functional foods, genetically modified foods and nutraceuticals
		CO3	Students will be able to understand current status of biotechnology in environment protection.
		CO4	Understand the principles of bioremediation and significance of GMO to the environment.
		CO5	waste management.
BIOPROCESS ENGINEERING AND TECHNOLOG Y	BTC040	CO1	understand the different metabolic pathways of microorganisms
		CO2	To have the comprehensive insight into the different type of fermenter
		CO3	To obtain knowledge of media design and industrial culture
		CO4	Students will be able to understand different type of fermenter and bioreactor
		CO5	Understand the principles of downstream processing, To understand the enzyme technology and their applications in industry.

GENETIC ENGINEERING	BTC050	CO1	To have the comprehensive insight into the different enzymes used in Genetic engineering lab
		CO2	To obtain knowledge of construction of vectors
		CO3	Students will be able to understand different type of cloning methods.
		CO4	Understand the principles of PCR& types
		CO5	To know the different sequence methods
LAB- III	BTC060	CO1	To have the comprehensive insight into the different enzymes kinetics
		CO2	Production of different compounds by fermentation
		CO3	to study the plant tissue culture methods
		CO4	Estimation of different bio active compounds
		CO5	Preparation of animal cell culture media and anti-angiogenic activity
BIOSTATISTICS, BIOINFORMATICS AND BIOENTERPRENURSHIP	BTC220	CO1	Application of statistics to understand and analyses the experimental results of biological sciences
		CO2	Retrieval of biological data
		CO3	phylogenetic analysis
		CO4	Primer designing, Insight into start-up companies.
		CO5	drug discovery and molecular docking
APPLIED BIOTECHNOLOGY		CO1	Scope of Biotechnology in India
		CO2	Use of plant tissue culture to society
		CO3	Applications of animal cell culture in medical field
		CO4	Applications of Bio-technology in solving agricultural problems
		CO5	Production of bio-pesticides and bio-fertilizers.
PLANT BIOTECHNOLOGY	BTD010	CO1	General Introduction to tissue culture
		CO2	Use of plant tissue culture to society
		CO3	Haploid technology to produce seedless crops
		CO4	Applications of Bio-technology in solving agricultural

			problems
		CO5	Applications of recombinant technology to produce disease free crops
ANIMAL BIOTECHNOLOGY	BTD020	CO1	General Introduction to Animal cell culture
		CO2	Use of different media to culture animal cells
		CO3	Different methods of cell separation
		CO4	Tissue Engineering using different matrices
		CO5	Cloning of animals
Project work	BTD030	CO1	Making the students to think about current scientific problems
		CO2	Designing the objectives and writing the synopsis
		CO3	Understanding the research articles
		CO4	Designing the experiments
		CO5	Analysing the data, interpretation of results and writing research papers

**JSS COLLEGE OF ATRS, COMMERCE AND SCIENCE
OOTY ROAD MYSURU-25**

PG DEPARTMENT OF BIO-TECHNOLOGY

PO-ATTAINMENT(Direct)

SUBJECT	COID	PO'S
MSc Biotechnol ogy	PO1	acquire knowledge on the fundamentals of biotechnology for sound and solid base which enables them to understand the emerging and advanced engineering concepts in life sciences
	PO2	To make the students develop interpersonal skills, written and oral communication and also to improve their body language and eye contact during presentations.
	PO3	To train the students in group discussions to develop leadership qualities and to respect the others idea and take the decisions for the welfare of society.
	PO4	To teach the students not to demoralize the others ideas and not to differentiate the intelligent and the ignorant, poor and the rich and to uphold the moral values in the society
	PO5	Upon completion of course students will have the ability to design the experiments to solve

		thecurrentproblemsinthesocietyrelatedtohealth,environmentandindustries,
	PO6	Uponcompletionofcoursestudentswillhavetheabilitytodesigntheexperimentstosolve thecurrentproblemsinthesocietyrelatedtohealth,environmentandindustries

JSS COLLEGE OF ATRS, COMMERCE AND SCIENCE
OOTY ROAD MYSURU-25
PG DEPARTMENT OF BIO-TECHNOLOGY
PO-ATTAINMENT (Indirect)

SUBJECT	COID	PO'S
MSc Biotechnol ogy	PO1	Acquire knowledge on the fundamentals of biotechnology for sound and solid base which enables them to understand the emerging and advanced engineering concepts in life sciences
	PO2	To make the students develop interpersonal skills, written and oral communication and also to improve their body language and eye contact during presentations.
	PO3	To train the students in group discussions to develop leadership qualities and to respect the others idea and take the decisions for the welfare of society.
	PO4	To teach the students not to demoralize the others ideas and not to differentiate the intelligent and the ignorant, poor and the rich and to uphold the moral values in the society
	PO5	Upon completion of courses students will have the ability to design the experiments to solve the current problems in the society related to health, environment and industries,

	PO6	Upon completion of course students will have the ability to design the experiments to solve the current problems in the society related to health, environment and industries
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JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: Postgraduate Department of English
Programme Name: Masters in English **Programme Code:** ENG
Session/Year: 2019-20

List of POs & PSOs

PO ID	PO Statement
PO1	Learn English language explored through literature
PO2	Acquire skills of criticism in reading literary works of different periods of various genres
PO3	Learn to think logically and relate them to real life scenario about the issues depicted in Literary texts
PO4	Imbibe good ethics explored in the works of great writers
PO5	Develop sensibility to understand social, cultural and spiritual issues explored in literary works.
PO6	Recognise and understand figurative language in literary works of various literature
PO7	Develop skills of appreciation to understand social, political and cultural milieu of various periods of literary development.
PSO1	Acquire the competence to work as English Language teacher at school and college level.
PSO2	Gain basic knowledge needed to enrol for M Phil or PhD programmes.
PSO3	Demonstrate good communication skills
PSO4	Draft literary essays demonstrating the skills of critical thinking and creative writing
PSO5	Participate in discussions and debates demonstrating good communication skills
PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: English Literature from Chaucer to Milton
Course Code: ENA010
Class: MA - I Sem

List of COs

CO ID	CO Statement
CO1	Understand the poetic devices such as allegory, metaphor, and rhyme
CO2	Deliberate in depth on Jacobian, Metaphysical poetry
CO3	Deliberate the details of Chaucer to Milton poetry
CO4	Understand and deliberate the characteristics of sonnets of Sidney, Spenser and Surrey

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
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Department: Postgraduate Department of English
Programme Name: Masters in English **Programme Code:** ENG
Session/Year: 2019-20

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Course Title: Elizabethan Age
Course Code: ENA020
Class: MA - I Sem

List of COs

CO ID	CO Statement
CO1	Understand the origin and growth of English Theatres and Renaissance plays
CO2	Produce the knowledge of Elizabethan culture, society and politics
CO3	Analyse Shakespearean Tragedies and Comedies in terms of language, character and Themes
CO4	Develop the ability to read, summarize and critically analyse Shakespearean sonnets

JSS Mahavidyapeetha
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Department: Postgraduate Department of English
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PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: 17th and 18th Century English Literature
Course Code: ENA030
Class: MA - I Sem

List of COs

CO ID	CO Statement
CO1	Apply knowledge of the historical and cultural contexts of the literature of this period in comprehending the works of major authors
CO2	Recognize and understand figurative language, such as allegory and metaphor, and literary techniques, like irony, rhyme, and allusion
CO3	Reflect and write analytically about the literary texts and their contexts
CO4	Develop their own skills of literary critical analysis

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Department: Postgraduate Department of English

Programme Name: Masters in English

Programme Code: ENG

Session/Year: 2019-20

List of POs & PSOs

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PSO5	Participate in discussions and debates demonstrating good communication skills
PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: 19th Century English Literature
Course Code: ENA040
Class: MA - I Sem

List of COs

CO ID	CO Statement
CO1	Understand the major influences on the Romantic and Victorian age
CO2	Learn the impact of industrialization and urbanization during the period
CO3	Recognize and understand figurative language explored in Romantic and Victorian Poetry and fiction
CO4	Learn and appreciate the poetry of Blake, Wordsworth, Coleridge, Shelley, Keats, Browning and Tennyson.
CO5	Critically analyse the representative texts of the period- Emma, Wuthering Heights, Hard Times and Jude the Obscure

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PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: Indian Drama
Course Code: ENA220
Class: MA - I Sem

List of COs

CO ID	CO Statement
CO1	Understand the important aspects and features of Indian Drama
CO2	Learn to interpret and appreciate poetic devices in Indian Classical Dramas
CO3	Compare and analyse the classical Indian dramas with the contemporary time
CO4	Write down the characteristics of interpretation of Indian classical dramas

JSS Mahavidyapeetha
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Department: Postgraduate Department of English
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PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: Literary Criticism-I
Course Code: ENB020
Class: MA - II Sem

List of COs

CO ID	CO Statement
CO1	Describe the basics of literary/ critical theories
CO2	Learn the meaning, elements and characteristics of classical literary criticism
CO3	Learn the technique of early literary criticism
CO4	Acquire the skills to interpret literary works using literary theories
CO5	Write down the details of Aristotle's poetics, Longinus' On the Sublime

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Department: Postgraduate Department of English
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Session/Year: 2019-20

List of POs & PSOs

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PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: Indian Writing in English – I
Course Code: ENB030
Class: MA - II Sem

List of COs

CO ID	CO Statement
CO1	Explain the origin and growth of Indian English Writing
CO2	Specify in details with examples poetry of Toru Dutt, Tagore, Sarojini Naidu and Aurobindo.
CO3	Learn in depth plays of Girish Karnad, Tendulkar and Dattani
CO4	Specify in depth Novels of R K Narayan, Mulk Raj Anand and Raja Rao
CO5	Appreciate and understand the critical essays of Hiriyan, Coomaraswamy and Aurobindo

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List of POs & PSOs

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PSO5	Participate in discussions and debates demonstrating good communication skills
PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: The Modern Age-I
Course Code: ENB040
Class: MA - II Sem

List of COs

CO ID	CO Statement
CO1	Explain the social, political and cultural milieu of the 20th Century England
CO2	Learn the impact of World War I and II on 20th Century poetry
CO3	Identify the characteristics and themes of Modern English poetry
CO4	Appreciate the poetry of great moderns- W B Yeats, TS Eliot, Plath, Seamus Heaney etc
CO5	Learn to interpret and appreciate the poetic devices of Modern poetry

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Department: Postgraduate Department of English
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PSO5	Participate in discussions and debates demonstrating good communication skills
PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: 20th Century Women's Writing: Theory & Practice
Course Code: ENB050
Class: MA - II Sem

List of COs

CO ID	CO Statements
CO1	Learn feminism as a movement and get awareness about gender issues
CO2	Appreciate the poetry of Kamala Das and Maya Angelou
CO3	Understand the injustices done towards women in patriarchal society
CO4	Understand and analyse the works of Emecheta, Atwood, Mahasweta Devi, Simone de Beauvoir, Virginia Woolf and Showalter
CO5	Learn the problems faced by women in societies of different traditions and culture

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Department: Postgraduate Department of English
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Session/Year: 2019-20

List of POs & PSOs

POID	PO Statement
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PSO5	Participate in discussions and debates demonstrating good communication skills
PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: English Essayists
Course Code: ENB220
Class : MA - II Sem

List of COs

CO ID	CO Statement
CO1	Understand the genre of prose essays and appreciate the essayist's artistic statements
CO2	Learn to appreciate the literary devices employed by the essayists
CO3	Analyse the importance of essays as a genre to bring social change based on close reading of the essayist's observations on society.
CO4	Understand the society and the life of people described in the prescribed essays
CO5	Deliberate in depth the essays of Bacon, Hazlitt, Bertrand Russell, Charles Lamb and Matthew Arnold

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JSS College of Arts, Commerce and Science
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Department: Postgraduate Department of English
Programme Name: Masters in English **Programme Code:** ENG
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PSO6	Work as English language trainer
PSO7	Take up worldwide research opportunities, more knowledgeable to qualify UGC- NET, K-SET and other competitive exams

Course Title: The Modern Age-II
Course Code: ENC010
Class : MA - III Sem

List of COs

CO ID	CO Statement
CO1	Explain the social, political and cultural milieu of the 20th Century England
CO2	Learn the impact of World Wars on 20th Century drama
CO3	Analyse the Modern English plays of Beckett and Osborne
CO4	Learn the details and techniques of modern English essays
CO5	Analyse the novels of DH Lawrence, Virginia Woolf, EM Forster and Doris Lessing
CO6	Analyse critically the types of modern theatres such as Absurd and Kitchen sink theatres

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Course Title: Indian Writing in English-II
Course Code: ENC020
Class: MA - III Sem

List of COs

CO ID	CO Statement
CO1	Explain the characteristic features of post-independent Indian Writing in English
CO2	Write down in details with examples characteristics of Modern Indian writing in English
CO3	Learn the characteristics of appreciation of short stories of Jahnvi Barua
CO4	Identify in details with examples appreciation of the fiction of Arundhati Roy and Amitav Ghosh.
CO5	Understand in depth literary essays of Gayatri Spivak, Aijaz Ahamed and Meenakshi Mukherjee.

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Course Title: New Literatures in English
Course Code: ENC030
Class: MA - III Sem

List of COs

CO ID	CO Statements
CO1	Learn the themes and techniques of New Literatures
CO2	Learn the impact of colonisation on native people and their literature
CO3	Read and appreciate the texts of various literatures like African, Australian, Canadian and Caribbean countries
CO4	Learn the perspectives and concerns of New Literatures in English
CO5	Appreciate the use of literary devices by commonwealth writers
CO6	Produce analysis on the essays of Ngugi, Northrop Frye and Wilson Harris

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Course Title: Indian English Poetry After Independence
Course Code: ENC230
Class: MA - III Sem

List of COs

CO ID	CO Statement
CO1	Learn and appreciate the modern Indian poetry.
CO2	Appreciate the poetry of Ezekiel, Naidu, Daruwalla, De Souza, Mahapatra, Parthasarathy, Anita Nair and Vikram Seth.
CO3	Understand contemporary scenario depicted in modern Indian poetry
CO4	Acquire the knowledge on trend setting themes explored in contemporary Indian poetry

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Course Title: A Course in Written and Spoken English
Course Code: ENC520
Class : MA - III Sem

List of COs

CO ID	CO Statement
CO1	Understand grammar rules and apply them in conversation and communication
CO2	Able to write effectively describing impressions, feelings and experiences
CO3	Understand in depth LSRW Skills.
CO4	Identify the characteristics of learning basic grammar
CO5	Write down in details with application, if applicable, speaking skills.
CO6	Learn the skills of writing resume and business applications.
CO7	Understand the characteristics of writing essays of various topics

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Course Title: Literary Criticism-II
Course Code: END010
Class : MA - IV Sem

List of COs

CO ID	CO Statement
CO1	Develop the skills of literary critical analysis
CO2	Understand in depth the various schools of literary criticism
CO3	Deliberate the details of critical essays of T S Eliot, F R Leavis, Carl Jung
CO4	Deliberate the details of interpretation of critical essays of Elaine Showalter, Helene Cixous and Spivak.
CO5	Write down in depth essays of Northrop Frye, Derrida, Elaine Showalter, Helene Cixous etc.

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Course Title: American Literature
Course Code: END020
Class : MA - IV Sem

List of COs

CO ID	CO Statement
CO1	Explain the movements of American Renaissance and Transcendentalism
CO2	Appreciate the poetry of Emily Dickinson, Wallace Stevens, Whitman and Robert Frost
CO3	Understand the essays of Emerson and Thoreau.
CO4	Appreciate the novels of Mark Twain, Hemmingway and Bradbury and describe the African American sensibility based on the readings of Toni Morrison, Jamaica Kincaid and Fredrick Douglas's writings

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Course Title: Major Project Work leading to Dissertation
Course Code: END030
Class : MA - IV Sem

List of COs

CO ID	CO Statement
CO1	Learn to investigate the area of topic chosen for project work
CO2	Learn the research skills to prepare the dissertation.
CO3	Learn research methodology to write research papers
CO4	Acquire the knowledge and skills to pursue research

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Course Title: Dalit Literature
Course Code: END230
Class : MA - IV Sem

List of COs

CO ID	CO Statement
CO1	Explain the origin and growth of Dalit literature in India.
CO2	Explain the sufferings of marginalised in Dalit writings
CO3	Compare and analyse the life of oppressed in various languages translated into English like Kannada, Gujarathi, Punjabi, Tamil and Telugu.
CO4	Compare and analyse the different forms of Dalit Literature based on different experiences.
CO5	Understand the classification and characteristics of Dalit Movement in post-independent India

JSS Mahavidaypeetha
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Department: PG Commerce

Programme Code: 1001

Programme Name: M.Com

Session/Year: 2019-20

PSO Attainment

Sl No	PSO ID	PSO Statement
1	PSO1	Inculcate the knowledge of business and the techniques of managing the Business with special focus on Accounting, finance, and financial services
2	PSO2	Identify knowledge based accounting principles and the latest application oriented corporate accounting methods.
3	PSO3	Develop decision making skill through costing methods and practical application of management accounting principles.
4	PSO4	Enhance taxation skills through a thorough understanding of tax laws

PO Attainment

Sl.No	PO ID	PO Statement
1	PO1	Understand role of accounting and finance in the present business scenario.
2	PO2	Identify the latest trends in banking and finance
3	PO3	Use wide varieties of tools and techniques to meet the emerging opportunities and challenges
4	PO4	Become an entrepreneur based on the knowledge gained.
5	PO5	Strengthen the knowledge base to take up CA/ICWA/ICS and other competitive examination
6	PO6	Acquire the ability to engage in independent & lifelong learning in the broader context of social and technical changes.
7	PO7	Accept the challenges of business world
8	PO8	Enhance logical thinking and decision making ability

CO Attainment

Semester: I

Sl. No	Course title	Course Code	CO No./Id	CO Statement
1	Accounting Theory	MCA010	MCA010.1	Acquaint a set of logical principles for evaluation and development of sound accounting practices.
			MCA010.2	knowledge on conceptual framework of accounting theory
			MCA010.3	Critical thinking skills to analyse and interpret accounting transactions.
			MCA010.4	Understand the recognition, measurement and disclosure principles of elements of financial statements.
2	Corporate Governance And Business Ethics	MCA080	MCA080.1	Understand the concept of corporate governance
			MCA080.2	knowledge about corporate ethics and cultural influences
			MCA080.3	Acquire knowledge of corporate social responsibility and accountability
			MCA080.4	Analyze the role of E-governance in present scenario.
3	Advanced Financial Management	MCA090	MCA090.1	Understand financial management concepts and its important functions.
			MCA090.2	Learn the process of evaluation of projects
			MCA090.3	Understand capital structure theories
			MCA090.4	Identify the dynamics of financial markets
4	Strategic	MCA100	MCA100.1	Understand the marketing strategy formulation
			MCA100.2	Learn the steps in implementation of

	Marketi ng			marketing strategies.
			MCA100.3	Analyze different marketing strategy
			MCA100.4	Learn about formulation and evaluation of marketing strategy
5	Business Policy And Environ ment	MCA210	MCA210.1	Insight on policy formation
			MCA210.2	Understand the environmental factors that influence business
			MCA210.3	Knowledge and significance of corporate social responsibility
			MCA210.4	Identify the Principles of Business ethics
6	Statistics For Business Decision s	MCA220	MCA220.1	Knowledge about application of probability theory and sampling in different areas of commerce
			MCA220.2	Analyze the various methods of theoretical probability distribution
			MCA220.3	Application of different tools in taking business decisions
			MCA220.4	Learn the advanced application oriented tests – F Distribution and Anova

Semester: II

Sl.No	Course title	Course Code	CO No./Id	CO Statement
1	Organizational Behavior	MCB030	MCB030.1	Understand individual behavior in the organization
			MCB030.2	Acquire the knowledge about foundation of individual behavior
			MCB030.3	Learn and apply skills in motivation
			MCB030.4	Evaluate individual behavior in group and resolve the conflicts
2	Entrepreneurial Development	MCB050	MCB050.1	Analyze the foundations and different dimensions of Entrepreneurial Development
			MCB050.2	Acquaint the skills of a young entrepreneur
			MCB050.3	Analyze the techniques of project planning, implementation and execution.
			MCB050.4	Identify the institutional support to entrepreneurs.
3	Capital Market Instruments	MCB010	MCB010.1	Understand the role of capital markets
			MCB010.2	Critically evaluate the various capital market instruments like Stock, bonds etc
			MCB010.3	Identify the dynamics of global capital markets
			MCB010.4	Understand the concept and use of Derivatives in risk management.
4	Human Resource Management	MCB240	MCB240.1	Knowledge about human resources, their significance and management in organizations
			MCB240.2	Analyze human resource planning
			MCB240.3	Learn the steps in HRD
			MCB240.4	Understand reward system and appraisal of individual
			MCB250.1	To understand and appreciate the role of financial services industry

5	Management of financial services	MCB250	MCB250.2	To grasp the trends in financial services industry particularly the impact of globalization of Financial Services
			MCB250.3	To gain an insight into the future of Financial Services industry
			MCB250.4	Verify the global developments in technology.

Semester: III and IV

Sl.No	Course title	Course Code	CO No./Id	CO Statement
1	International Business	MCC010	MCC010.1	Understand the scope of international business along with drivers of globalization
			MCC010.2	Analyze different aspects of International Business environment and the issues associated with them.
			MCC010.3	Identify policy and practice skills related to international business
			MCC010.4	Identify the various modes of entry in international business.
2	Business Research Methods	MCC030	MCC030.1	Evaluate various research decisions
			MCC030.2	Learn the methods of data collection
			MCC030.3	Analysis and interpretation of data
			MCC030.4	Equip the skills of report writing
3	Security Analysis And Portfolio Management	MCC040	MCC040.1	Knowledge about practical aspects of investment analysis
			MCC040.2	Understand the functions of SEBI
			MCC040.3	Analyze the various investment alternatives
			MCC050.4	Learn the skills to construct investment portfolio
			MCC230.1	Understand the significance and contribution of indirect taxes (GST) in the Indian and global economy.

4	Indirect Tax Law and Practice	MCC230	MCC230.2	Comprehend the principles of taxation and incidence process of indirect taxes in market orientated economy.
			MCC230.3	Understand the implications of indirect taxes on the taxable capacity of consumers, dealers and society at large.
			MCC230.4	Become tax consultants for tax planning, tax management, payment of tax and filling of tax returns
5	Cost Accounting for Decision Making	MCC250	MCC250.1	Understand the basic concept of marginal costing.
			MCC250.2	Analyze and apply of profitability and cost concept.
			MCC250.3	Evaluate the managerial decisions- make or buy decisions.
			MCC250.4	Examine the cost accounting techniques.

Ssssl.No	Course title	Course Code	CO No./Id	CO Statement
1	International Accounting	MCD010	MCD010.1	Understand international accounting issues related to global financial reporting.
			MCD010.2	Examine, analyze and assess theoretical and practical aspects of accounting harmonization.
			MCD010.3	Identify major diversities and challenges of financial reporting in the global arena and IFRS.
			MCD010.4	Learn the techniques of international financial statement analysis
			MCD020.1	Understand changing business and financial environment

2	Current Trends In Business And Commerce	MCD020	MCD02 0.2	Equip the skills required for competitive examinations and JRF, NET and SLET
			MCD02 0.3	Develop analyzing and decision making skills on current topics of business

			MCD02 0.4	Identify the reforms in areas of banking, insurance, capital markets and taxation.
3	Innovations In Accounting	MCD210	MCD21 0.1	To make students familiar with various innovations taking place in accounting
			MCD21 0.2	To learn valuation of human resource
			MCD21 0.3	To learn valuing the brand
			MCD21 0.4	To understand the concepts of Responsibility accounting
4	Corporate Tax Law And Planning	MCD230	MCD23 0.1	Understand the incidence of tax on residential status of the companies
			MCD23 0.2	Understand the different types of companies under corporate income tax act.
			MCD23 0.3	Know the different sources of income for corporate assesses.
			MCD23 0.4	Become a manger of a company/tax consultant and reduce the tax burden and maximize the company's wealth
5	Cost Management	MCD250	MCD25 0.1	Understand the scope and need for cost control and management.
			MCD25 0.2	Familiarize with the basic cost control and management tools.,
			MCD25 0.3	Know the manufacturing industries cost system and analysis through the statistical tool.
			MCD25 0.4	Understand the importance of operation research in cost control and management

Semester: I

Course title	Course Code	CO No./Id	CO Statement
Biosystematics and Non Chordata	ZOA050	ZOA050.1	Understand the classification of major and minor invertebrate phyla
		ZOA050.2	Give some examples and basic characteristics of each phylum
		ZOA050.3	Understand the evolutionary pathway and its significance
		ZOA050.4	Adaptive characters of animals coming under different invertebrate phyla
Biological Chemistry	ZOA060	ZOA060.1	Identify the five classes of polymeric biomolecules and their monomeric building blocks.
		ZOA060.2	Explain the specificity of enzymes (biochemical catalysts), and the chemistry involved in enzyme action.
		ZOA060.3	Understand types, Structure, biochemical properties, and functions of vitamins.
		ZOA060.4	Explain how the metabolism of organic compounds leads ultimately to the generation of large quantities of ATP.
Cytogenetics	ZOA070	ZOA070.1	Describe the fundamental molecular principles of genetics
		ZOA070.2	Understand the structure and function of DNA & RNA
		ZOA070.3	Understand about the transmission, distribution, arrangement, and alteration of genetic information and how it functions and is maintained in populations
		ZOA070.4	Describe the basics of genetic mapping
		ZOA070.5	Explain basic structure of animal cell and its organelles
		ZOA070.6	Describe the functions and organization of cell organelles

Tools and Techniques in Biology	ZOA220	ZOA220.1	Describe the methodology involved in biotechniques.
		ZOA220.2	Describe the applications of bio instruments
		ZOA220.3	Demonstrate knowledge and practical skills of using instruments in biology and medical field.
		ZOA220.4	Perform techniques involved in molecular biology and diagnosis of diseases
		ZOA220.5	Update current knowledge regarding biomedical engineering involving new methods and the instrumentation.
Histology and Histopathology	ZOA230	ZOA230.1	Understand the applications of dyes and its classification.
		ZOA230.2	Know the functional morphology of various mammalian organs.
		ZOA230.3	Imbibe the knowledge on histochemical techniques.
		ZOA230.4	Describe the etiology and pathology of liver cirrhosis and atherosclerosis.
		ZOA230.5	Explain histopathology of breast and prostate tumours.

Semester: II

Course title	Course Code	CO No./Id	CO Statement
Chordata	ZOB050	ZOB050.1	Understand the classification of chordates
		ZOB050.2	Give some examples and basic characteristics of protochordates
		ZOB050.3	Give some examples and basic characteristics of vertebrates
		ZOB050.4	Understand the evolutionary pathway and its significance
		ZOB050.5	Analyze adaptive characters of animals coming under different vertebrate classes
Animal Physiology	ZOB060	ZOB060.1	Understand the mechanism of transport of molecules, stepwise release of energy, aerobic and anaerobic respiration

		ZOB060.2	Describe the physiology of digestive and respiratory system of human beings.
		ZOB060.3	Understand the blood composition, types, groups and circulatory system.
		ZOB060.4	Describe the physiology of excretory system and nervous system of human beings.
		ZOB060.5	Know the physiology of sense organs, muscles, and reproductive system.
Entomology	ZOB070	ZOB070.1	Understand insects encountered in agricultural fields.
		ZOB070.2	Envisage an insight on economically important pests of various foods, fiber and household
		ZOB070.3	Understand various insect pest management methods and its significance
		ZOB070.4	Learn to apply various agricultural equipment and understand the effect of chemicals and its dosages in agricultural pest management
		ZOB070.5	Learn to apply the pest control methods wisely to minimise ecological backlash
		ZOB070.6	Discuss the evolutionary significance of insect plant interaction and insect animal interaction.
Developmental Biology	ZOB220	ZOB220.1	Understand the molecular concepts of developmental biology during fertilization
		ZOB220.2	Know about Noble prize concepts during frog development viz., Nucleocytoplasmic interactions
		ZOB220.3	Explain on axis development in drosophila
		ZOB220.4	Describe endocrine and molecular control in metamorphosis of insects and amphibians
		ZOB220.5	Explain the various stages of chick embryonic development
Immunology	ZOB230	ZOB230.1	Outline the key components of the innate and adaptive immune responses.
		ZOB230.2	Describe about cell types and organs which are involved in an immune response

		ZOB230.3	Describe the Infectious diseases, hypersensitivity, autoimmune disorders, immunodeficiency diseases
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Semester: III

Course title	Course Code	CO No./Id	CO Statement
Molecular Biology and Biotechnology	ZOC040	ZOC040.1	Know nucleic acids, DNA replication and its mechanism.
		ZOC040.2	Understand transcription and its modifications.
		ZOC040.3	Explain genetic code, enzymes, factor and the process of translation.
		ZOC040.4	Analyse gene regulation, lytic and lysogenic cycles in prokaryotes.
		ZOC040.5	Understand gene regulation in eukaryotes.
		ZOC040.6	Explain molecular mechanism of DNA damage repair.
Reproductive Biology	ZOC050	ZOC050.1	Understand structure and function of reproductive organs
		ZOC050.2	Explain the structure of reproductive cells
		ZOC050.3	Describe the role of internal cues in reproduction
		ZOC050.4	Describe the role of external factors in reproduction
		ZOC050.5	Analyse the role of endocrine glands and their secretions in reproduction
		ZOC050.6	Identify the factors affecting fertility
		ZOC050.7	Know different types of assisted reproductive technologies.
Ecology and Wildlife	ZOC060	ZOC060.1	Demonstrate and Understand ecological relationships between organisms and their environment.
		ZOC060.2	Present an overview of diversity of life forms in an ecosystem.
		ZOC060.3	Explain and identify the role of the organism in energy transfers

		ZOC060.4	Describe the Habitat ecology and Resource ecology
		ZOC060.5	Understand the types of environmental Pollution and their management
		ZOC060.6	Scope, Values and Conservation strategies of wildlife.
Ethology	ZOC230	ZOC230.1	Evaluate the learning and instinct behavior.
		ZOC230.2	Explain the mechanisms in instinct and behaviour
		ZOC230.3	Explain how animals learn
		ZOC230.4	Compare learning and instinct behaviour.
		ZOC230.5	Analyse any problem about animal behaviour
		ZOC230.6	Explain the importance of evolution for animal behaviour.
		ZOC230.7	Explain evolution and behaviour.
		ZOC230.8	Explain natural selection and behaviour.
		ZOC230.9	Explain the relationship between predators and prey
		ZOC230.10	Explain social behaviour.

Semester: IV

Course title	Course Code	CO No./Id	CO Statement
Advanced Genetics and Computational Biology	ZOD030	ZOD030.1	Understand the genomic organization of prokaryotes and eukaryotes.
		ZOD030.2	Know the applications of various model organisms in genomic research.
		ZOD030.3	Able to analyze the pedigree, psychosomatic disorders, prenatal diagnosis and genetic counselling.
		ZOD030.4	Recognize few heritable diseases in man.
		ZOD030.5	Understand the basic concepts of genomics
		ZOD030.6	Understand the basic concepts of proteomics
		ZOD030.7	Understand the nucleic acid and protein

			databases and tools.
Applied Zoology	ZOD040	ZOD040.1	Explain plant insect interaction, origin of pest and its control.
		ZOD040.2	Understand vectors and its communicable diseases.
		ZOD040.3	Explain races of silkworm their disease and its control.
		ZOD040.4	Know about the importance of insects in forensic science and medicine.
		ZOD040.5	Know about aquaculture and its practices in India.
Major Project	ZOD020	ZOD020.1	Understand the concepts of Project Management for planning to execution of projects
		ZOD020.2	Find importance of reference work Using tools of information such as periodical ,journals, online resources
		ZOD020.3	Break work down the tasks of project and determine handover procedures
		ZOD020.4	Interpret, analyze and presentation of the results obtained and compare with similar works and draw conclusion.
PO ID		PO Statement	
ZOO17.PO1		Imbibe the knowledge with facts and figures related Zoology.	
ZOO17.PO2		Understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevancies in the day-to-day life.	
ZOO17.PO3		Identify, formulate, research literature, and analyze complex problems reaching substantiated conclusions using first principles of mathematical, biological, physical and chemical sciences.	
ZOO17.PO4		Will be able to think creatively to propose novel ideas in explaining facts and figures or providing new solution to the problems.	
ZOO17.PO5		Develop scientific outlook not only with respect to Zoology but also in all aspects related to life.	
ZOO17.PO6		Realize that interdisciplinary knowledge in other faculties can have greatly and effectively influence which inspires in evolving new scientific theories and inventions.	

ZOO17.PO7	Imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.
ZOO17.PO8	Develop various communication skills such as reading, listening, speaking, etc.
ZOO17.PO9	Realize that acquiring knowledge is a continuous process and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.
PSO ID	PSO Statement
ZOO17.PSO1	Understand the classification and taxonomic aspects of the animal world (chordates and non-chordates). The students will be able to identify the taxonomic group of a given animal based on the external characteristics.
ZOO17.PSO2	Understand the basic concepts of Animal physiology. The students will be able to identify and understand the important life processes which are essential for continuation of life on earth.
ZOO17.PSO3	Understand the nature and structure of biomolecules and basic concepts of Biological chemistry.
ZOO17.PSO4	Understand the concepts of Genetics, Cell Biology and Molecular Biology.
ZOO17.PSO5	Understand the basic principles and concepts of environmental science, ecology and nature conservation.
ZOO17.PSO6	Understand the importance of knowledge of wildlife and animal behaviour for conservation and balancing the nature.
ZOO17.PSO7	Understand the tools and techniques employed in Biological research and experiments.
ZOO17.PSO8	Understand the process of evolution.
ZOO17.PSO9	Understand the concept and applications of sericulture, apiculture, animal husbandry, Lac culture etc.

JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: PG Department of Social Work

Programme Name: MSW

Programme Code: MSW 13

Session/Year: 2019-20

List of POs & PSOs

POID	PO Statement
PO1	Develop the capacity to undertake Research
PO2	Develop the skills and capacities to work in a multidisciplinary team
PO3	Develop the capacity to project self as a professional
PO4	Equipped with the knowledge of Social dynamism
PO5	Equipped to work in various fields of Social Work
PO6	Imbued with the core values and principles of Social Work
PSO1	Equip to work in the Community Development Programmes
PSO2	Develop the capacity to work in the field of Human Resource as Labour Welfare Officers, HR Executives and liaison officers
PSO3	Develop the skill to work as medical and psychiatric social workers
PSO4	Equip with the skill to work in family and Child Welfare Centres
PSO5	Develop the capacity to work in correctional settings

Course Title: Social Work – History and Ideologies

Course Code: SWA 010

List of COs

CO ID	CO Statement
CO1	Learn the details of Indian History of Social work Profession
CO2	Understand in depth Values and principles of Social work
CO3	Elaborate the details of Contemporary Ideologies for Social change
CO4	731 Learn the details of Western Ideologies for Social Change and History of Social Work

Course Title: Work with Individuals and Families

Course Code: SWA 020

List of COs

CO ID	CO Statement
CO1	Learn in details with application of social case work as method of Social Work
CO2	Learn in detail the Values and principles of Social Case work
CO3	Learn the details of theories and process of Casework
CO4	Specify in depth application of Social Case work in different settings

Course Title: Work with Groups

Course Code: SWA 030

List of COs

CO ID	CO Statement
CO1	Identify in detail the concept of group and group work
CO2	Learn the process of Group Work
CO3	Understand in depth Group dynamics and skills in group work

Course Title: Work with Communities

Course Code: SWA 040

List of COs

CO ID	CO Statement
CO1	Learn in details with examples concept of Community and Community organization
CO2	Learn in depth models and strategies of Community Organization
CO3	Understand the skills of Community organize
CO4	Understand in depth Micro and macro policies of community Organizaion

Course Title: Human Growth & Development

Course Code: SWA 050

List of COs

CO ID	CO Statement
CO1	Learn in detail Human life span and principles of growth and development
CO2	Understand the details of Developmental stages of Human Life span
CO3	Understand the theories of Human Development and learning
CO4	Understand the theories of Basic Human Needs, motivation, Personality

Semester: II

Course Title: Social Work Research and Statistics

Course Code: SWB 010

List of Cos

CO ID	CO Statement
CO1	Understand the meaning, objectives and scope of Social Work Research
CO2	Understand in detail the Process of Social Work Research

Course Title: Developmental and Welfare Services

Course Code: SWB 020

List of COs

CO ID	CO Statement
CO1	Deliberate in depth need for social welfare organization
CO2	Learn the procedure of establishment of Human Service Organizations
CO3	Understand the process of Management
CO4	Learn in detail the concepts of Programme Development and Public Relations

Course Title: Personal and Professional Growth

Course Code: SWB 030

List of COs

CO ID	CO Statement
CO1	Understand the meaning, importance, purpose and process of communication
CO2	Learn the use of Visual aids in communication
CO3	Understand the counselling situations and approaches
CO4	Understand self and developing self awareness
CO5	Understand the details of emotions and emotional expressions
CO6	Understand in depth life skills
CO7	Identify in depth Values, attitudes and professional ethics

Course Title: Communication and Counselling

Course Code: SWB220

List of COs

CO ID	CO Statement
CO1	Identify in detail the concept of group and group work
CO2	Learn the process of Group Work
CO3	Understand in depth Group dynamics and skills in group work

Course Title: Social Science Perspectives for Social Work Practice **Course Code:** SWD 240

List of COs

CO ID	CO Statement
CO1	Elaborate the characteristics of sociology and its relationship with other social sciences
CO2	Specify the characteristics of social movements in India

Semester: III

Course Title: Human Resource Management

Course Code: SWC 010

List of COs

CO ID	CO Statement
CO1	Learn the concept and philosophy of Human Resource Management
CO2	Understand the policies, sources and methods of talent acquisition
CO3	Elaborate in details with examples Compensation Management
CO4	Elaborate the changing scenario of strategic Human Resource Management 70

Course Title: Organizational Behaviour and Organizational Behaviour

Course Code: SWC 020

List of COs

CO ID	CO Statement
CO1	Specify the significance of transactional analysis and theories of motivation
CO2	Understand group dynamics and organization development
CO3	Elaborate in depth on organizational change, stress and burnout

Course Title: Preventive and Social Medicine and Medical Social Work

Course Code: SWC 030

List of COs

CO ID	CO Statement
CO1	Learn in depth concept of health and health care
CO2	Learn in details with application Medical Social Work and Rehabilitation of Patients

Course Title: Social Policy, Planning and Development

Course Code: SWC 040

List of COs

CO ID	CO Statement
CO1	Understand in detail concept and purpose of social policies and values underlying social policy
CO2	Learn in detail Sectoral policies in India
CO3	Learn the social planning process
CO4	Learn in detail the concept of social development and Indicators of development

Course Title: Legal System in India

Course Code: SWC 050

List of COs

CO ID	CO Statement
CO1	Learn in depth concept of social justice and understanding of Rights
CO2	Understand the divisions of law and chapters under IPC and CRPC
CO3	Understand the details of structure and functions of District Court, High Court and Supreme Court

Semester: IV

Course Title: Employee Relations and Legislations

Course Code: SWD 010

List of COs

CO ID	CO Statements
CO1	Identify in details with application concept, philosophy and principles of employee relations
CO2	Deliberate on functioning of trade unions in India
CO3	Learn the employee legislations
	Understand in depth process of collective bargaining

Course Title: Mental Health and Psychiatric Social Work

Course Code: SWD 020

List of COs

CO ID	CO Statement
CO1	Learn the details of concept of Mental Health, Mental Illness and its classification
CO2	Understand the concept of psychiatric Social Work and Multidisciplinary approach and team work
CO3	Learn about the institutional care of mentally ill and role of social workers
CO4	Understand the psycho social rehabilitation and legislations related to mental Health

Course Title: Human Resource Development and Employee Wellness Course Code: SWD 030

List of Cos

CO ID	CO Statement
CO1	Understand concept, approaches and dimensions of Human resource development
CO2	Deliberate in depth on HRD Interventions
CO3	Learn in details with examples concept and importance of talent development
CO4	Deliberate on employee wellness and standardization of systems

Course Title: Society and Social Work

Course Code: SWD 040

List of COs

CO ID	CO Statement
CO1	Understand in depth on society and its institutions
CO2	Understand in details on the different concepts of psychology
CO3	Specify the characteristics of mental health and mental disorders

Course Title: Social Science Perspectives for Social Work Practice Course Code: SWD 050

List of COs

CO ID	CO Statement
CO1	Deliberate the characteristics of sociology and its relationship with other social sciences
CO2	Specify the characteristics of social movements in India

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru – 570 025, Karnataka, India
2019-20

Name of the Department: PG Department of Chemistry

Programmes offered: M.Sc. in Chemistry

Course outcomes (%Attainments)

Course Title	Course Code	CO No./Id	CO Statement
Fundamentals of Chemical Analysis	CHA 090	CO1	This course in analytical chemistry will make students to get emphasized on quantitative (and sometimes qualitative) methods of analysis with relevant equilibrium chemistry.
		CO2	Learning this course content will develop the ideas with the fundamental aspects in analytical chemistry.
		CO3	Students will be enriched with explored topics such as experimental design, sampling, calibration strategies, standardization, optimization, statistics, and the validation of experimental results.
		CO4	These topics will build the interest in students in developing good experimental protocols, and in interpreting experimental results.
		CO5	Analytical knowledge for the quantitative analysis of various samples of different origin is best sowed among the students under titrimetric aspects.
		CO6	The statistical aspects are learnt and from which the spirit of assessing the results will be enhanced.
		CO7	Method development and validation features will become familiar so that they will become outstanding basement for their career in various industries.
Inorganic Chemistry-I	CHA 100	CO1	Understand the details of Molecular symmetry and group theory and applications, Representation of groups.
		CO2	Learn in details with examples VSEPR model, Non-aqueous solvents, Electron deficient compounds, Lanthanides & Actinides.
		CO3	Understand the classification and characteristics of Organometallics of transition metals.
		CO4	Specify in depth Ferrocene and ruthenocene, Complexes containing alkene, alkyne, arene and allyl ligands.
Organic Chemistry-I	CHA 110	CO1	Learn in details with examples Stereoisomerism, Stereoselectivity, Optical, Geometrical, isomerism and Conformational isomerism
		CO2	Understand in details with examples Molecular rearrangements, Carbon to carbon migration, Carbon to nitrogen migration.
		CO3	Learn the classification and characteristics of Heterocyclic chemistry.
Physical	CHA	CO1	Learn in depth Concepts of entropy and free energy, Partial molar

Chemistry-I	120		properties.
		CO2	Learn the details of Fugacity, Statistical thermodynamics.
		CO3	Learn the details of Chemical Kinetics, Kinetics of reactions in solution, Linear free energy, Enzyme kinetics.
		CO4	Learn the characteristics of Electrochemistry, Energetics of cell reactions, Corrosion.
Analytical Chemistry Practicals	CHA 050	CO1	Learn in depth selection of analytical methods with suitable techniques.
		CO2	Understand in depth classical and instrumental methods.
		CO3	Learn in depth quantification of individual analytes.
		CO4	Identify the details of quantification of individual analytes.
Inorganic Chemistry Practicals	CHA 060	CO1	Specify the details of reagents required for analysis.
		CO2	Understand in depth experiment for quantitative analysis of inorganic samples such as ore, metals, complexes mixture of metals and complexes etc.
		CO3	Understand the classification and characteristics of semi-micro qualitative analysis.
		CO4	Learn the details of skills for the scientific and relevant documentation and risk and security assessment.
Organic Chemistry Practicals	CHA 070	CO1	Students are involved in the multi-step synthesis of different organic compounds.
		CO2	Understand the qualitative analysis of binary mixture of organic compounds through separation, identification of functional groups and preparation of solid derivatives.
Physical Chemistry Practicals	CHA 080	CO1	Understand the details of instruments like UV-Visible Spectrophotometer, Potentiometer, pH meter, etc.
		CO2	Learn the details of concentration of the species in given solutions using kinetic methods.
		CO3	Understand the characteristics of physical properties of substances.
		CO4	Learn the characteristics of different thermodynamic parameters.
Separation Techniques	CHB 090	CO1	Knowledge of various physico-chemical separation techniques with principle, mechanism of separation, materials or compounds or analytes in the sample to be separated.
		CO2	Built in ability to select appropriate separation technique for intended problem.
		CO3	Capacity and scope of the built knowledge to separate analytes in multi-

			component mixtures.
		CO4	Ability to design separation procedure for the effective solution of intended problem.
		CO5	Enriched knowledge on method development and validation to propose new analytical separation method.
		CO6	Attainment of ability to describe the instrumentation required for the various separation techniques and their associated operating principles.
		CO7	Student will reach a stage to understand the significance, quality, and limitations of the results produced by the various separation techniques.
Advanced Coordination Chemistry	CHB 100	CO1	Learn in depth Preparation of coordination compounds, Stability of coordination compounds, Geometries of metal complexes, Determination of stability constants, Crystal field theory.
		CO2	Understand in details with examples Molecular Orbital Theory, Electronic spectra, Magnetic properties.
		CO3	Learn in details with examples Reaction and Mechanisms, Substitution reactions.
		CO4	Identify in details with examples Inner-sphere mechanism and outer-sphere mechanism.
Organic Chemistry-II	CHB 110	CO1	Understand in depth Reductions and Oxidations.
		CO2	Learn in depth Reagents in organic synthesis, Green Synthesis.
		CO3	Understand in details with examples Photochemistry and concerted reactions, Electrocyclic reactions.
Physical Chemistry - II	CHB 120	CO1	Learn in depth Quantum Chemistry.
		CO2	Learn in details with examples Microwave and Vibration spectroscopy.
		CO3	Understand in depth Raman and UV-Visible spectroscopy.
		CO4	Learn the classification and characteristics of NQR, Mössbauer, ESR spectroscopy.
Analytical Chemistry Practicals	CHB 050	CO1	Learn in depth selection of analytical methods with suitable techniques.
		CO2	Understand in depth classical and instrumental methods.
		CO3	Learn in depth quantification of individual analytes.
		CO4	Identify the details of quantification of individual analytes.
Inorganic Chemistry Practicals	CHB 060	CO1	Specify the details of reagents required for analysis.
		CO2	Understand in depth experiment for quantitative analysis of inorganic samples such as ore, metals, complexes mixture of metals and complexes etc.

		CO3	Understand the classification and characteristics of semi-micro qualitative analysis.
		CO4	Learn the details of skills for the scientific and relevant documentation and risk and security assessment.
Organic Chemistry Practicals	CHB 070	CO1	Students are involved in the multi-step synthesis of different organic compounds.
		CO2	Understand the qualitative analysis of binary mixture of organic compounds through separation, identification of functional groups and preparation of solid derivatives.
Physical Chemistry Practicals	CHB 080	CO1	Understand the details of instruments like UV-Visible Spectrophotometer, Potentiometer, pH meter, etc.
		CO2	Learn the details of concentration of the species in given solutions using kinetic methods.
		CO3	Understand the characteristics of physical properties of substances.
		CO4	Learn the characteristics of different thermodynamic parameters.
Instrumental Methods of Analysis	CHC 010	CO1	Students will gain the knowledge on the differences between classical and instrumental methods of chemical analysis.
		CO2	Students will attain the state to explain different types of Instrumental methods employed in chemical analysis.
		CO3	Students are developed with the understanding of the range and theories of instrumental methods available in analytical chemistry.
		CO4	Student can make out the clear distinctions among spectrometric, electro-analytical, thermal and microscopic methods with respect principle, materials and procedural or operational aspects in each.
		CO5	Students gain the knowledge pertaining to the appropriate instrumental technique to be employed for the successful analysis of complex mixtures.
		CO6	Obtain the practical experience in selected instrumental methods of analysis.
		CO7	Develop the skills on instrumental methods for planning, developing, conducting, reviewing, conducting experiments and reporting results.
Spectroscopy	CHC 020	CO1	Understand in details with examples UV-Visible and IR spectroscopy.
		CO2	Understand in depth Nuclear magnetic resonance spectroscopy, Chemical shift.
		CO3	Learn the characteristics of ¹³ C-NMR spectroscopy.
Analytical Chemistry Practicals	CHC 210	CO1	Identify in details with examples selection of analytical methods with suitable techniques.
		CO2	Learn in details with examples Analyze various samples with different classical and simple instrumental skills.
		CO3	Learn in details with examples classical and instrumental methods.

		CO4	Understand the details of Propose and conduct experiment for quantification of individual analyte.
Inorganic Chemistry Practicals	CHC 220	CO1	Learn in depth analysis of various complex mixtures by multistep reactions.
		CO2	Understand the details of instruments and to overcome the general problems arises during the analysis.
		CO3	Learn in depth sampling, analytical and interpretation and presentation of results.
		CO4	Learn the details of Preparation and characterization of complexes.
Organic Chemistry Practicals	CHC 230	CO1	Learn in depth various estimations like sugars, enol content, ketones, nitro, protein etc.
		CO2	Learn in depth multistep synthesis and also mechanisms.
		CO3	Specify the details of reactions under multistep synthesis.
		CO4	Identify in depth isolation experiments, preliminary identification and separation.
Physical Chemistry Practicals	CHC 240	CO1	Learn the details of handling instruments and to overcome the general problems arises during the analysis.
		CO2	Learn the details of concepts of rate constants, energy of activation, order of the reaction.
		CO3	Learn in depth thermodynamics parameters.
		CO4	Specify in depth kinetics experiments.
Bioinorganic Chemistry	CHD 010	CO1	Understand in details with examples Structural and molecular biology, Bioenergetics, Sodium and potassium-channels and pumps, Biochemistry of calcium, Vitamin B12 and Coenzymes.
		CO2	CO2: Understand the characteristics of Electron transport proteins and redox enzymes, Non-redox metalloenzymes.
		CO3	CO3: Specify the classification and characteristics of Identify the details of Metal ion transport and storage, Oxygen transport and oxygen uptake proteins.
		CO4	CO4: Learn the details of Metals in medicine, Disease due to metal deficiency and treatment, Metal complexes as drugs and therapeutic agents, Treatment of toxicity.
Advanced Physical	CHD 020	CO1	Learn in details with examples Understand the characteristics of Kinetics and Thermodynamics of Polymerization, Copolymerization, Polymer

Chemistry			molecular weights, Conducting Polymers.
		CO2	Learn the characteristics of Polymer Degradation, Stability and Environmental Issues.
		CO3	Learn in depth Photochemistry, Mechanism of absorption and emission of radiation, Photophysical kinetics.
		CO4	Understand in depth Nuclear Chemistry, Radiation Chemistry.
Analytical Chemistry Practicals	CHD 210	CO1	Identify in details with examples selection of analytical methods with suitable techniques.
		CO2	Learn in details with examples Analyze various samples with different classical and simple instrumental skills.
		CO3	Learn in details with examples classical and instrumental methods.
		CO4	Understand the details of Propose and conduct experiment for quantification of individual analyte.
Inorganic Chemistry Practicals	CHD 220	CO1	Learn in depth analysis of various complex mixtures by multistep reactions.
		CO2	Understand the details of instruments and to overcome the general problems arises during the analysis.
		CO3	Learn in depth sampling, analytical and interpretation and presentation of results.
		CO4	Learn the details of Preparation and characterization of complexes.
Organic Chemistry Practicals	CHD 230	CO1	Learn in depth various estimations like sugars, enol content, ketones, nitro, protein etc.
		CO2	Learn in depth multistep synthesis and also mechanisms.
		CO3	Specify the details of reactions under multistep synthesis.
Physical Chemistry Practicals	CHD 240	CO4	Identify in depth isolation experiments, preliminary identification and separation.
		CO1	Learn the details of handling instruments and to overcome the general problems arises during the analysis.
		CO2	Learn the details of concepts of rate constants, energy of activation, order of the reaction.
		CO3	Learn in depth thermodynamics parameters.
Project /Dissertation	CHD 250	CO1	Understand in details with examples literature survey on the problem/s to be solved.

Work		CO2	Learn the details of suitable research methodologies to propose and to perform experiments.
		CO3	Understand in depth ability to take up research work.
		CO4	Understand the details of research articles, patents, book chapters or books on relevant research problem.
		CO5	Learn in depth skills of writing research reports in the form of articles or thesis.

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: PG Mathematics

Programme Name: M.Sc.,

Programme Code:

Session/Year:2019-20

List of POs & PSOs

POID	PO Statement
PO1	To move away from the conventional pedagogy of teaching mathematics
PO2	To include methods of facilitating learning such as projects, group work and participative learning
PO3	To Innovate, invent and solve complex mathematical problems using the knowledge of pure and applied mathematics
PO4	To impart knowledge of some basic concepts and principles of the discipline
PO5	To establish inter-disciplinarily between mathematics and other subjects from Humanities and the Social Sciences.
PO6	To provide in-service training for school teachers. To learn to apply mathematics to real life situations and help in problem solving
PSO1	Explain the importance of mathematics and its techniques to solve real life problems and provide the limitations of such techniques and the validity of the results
PSO2	Propose new mathematical and statistical questions and suggest possible software
PSO3	Continue to acquire mathematical and statistical knowledge and skills appropriate to
PSO4	Ability to use computer calculations as a tool to carry out scientific investigations and
PSO5	Crack lectureship and fellowship exams approved by UGC like CSIR – NET and SLET.
PSO6	Apply knowledge of Mathematics, in all the fields of learning including higher research and its extensions.

Course Title: Algebra-I

Course Code:MAA010

List of COs

CO ID	CO Statement
CO1	Define and interpret the concepts of divisibility, congruence, greatest common divisor, prime, and prime-factorization and Apply the Law of Quadratic Reciprocity
CO2	To analyze and demonstrate examples of subgroups, normal subgroups and quotient groups.
CO3	Assess properties implied by the definitions of groups and To use the concepts of isomorphism and homomorphism for groups
CO4	Analyze Permutation groups and the Class Equation and Sylow theorems
CO5	To demonstrate knowledge of conjugates.

Course Title: Real Analysis-I

Course Code:MAA020

CO ID	CO Statement
CO1	Understand the characteristics of extended real number system, the n-dimensional Euclidean space
CO2	Study the details of inequalities and its applications
CO3	Learn the characteristics of sequences and Cauchy's sequences ,upper and lower limits
CO4	Understand the details of series of real numbers ,tests for convergence
CO5	Learn in detail with examples-multiplication of series, double series, infinite products

Course Title: Real Analysis-II

Course Code:MAA030

CO ID	CO Statement
CO1	Deliberate in depth the basic topological properties of the subsets of the real numbers
CO2	Understand in details with examples, Continuity of functions
CO3	Deliberate the details of Differentiability, mean value theorems
CO4	Learn the details of The Riemann-Stieltje's integral
CO5	Identify in detail Integration and differentiation with examples.

Course Title: Complex Analysis-I

Course Code:MAA040

CO ID	CO Statement
CO1	Understand the characteristics of represent complex numbers algebraically and geometrically, Study stereographic projection
CO2	Understand the characteristics lines and circles
CO3	Study the characteristics of analytic functions, Cauchy-Riemann equations and harmonic functions
CO4	Learn in depth sequences and series , uniform convergence of power series and entire functions
CO5	Learn in detail with examples-linear fractional transformations, cross ratio, symmetry, conformal mapping, evaluate definite integrals
CO6	Understand different types of Cauchy theorems and Cauchy integral formula and apply these to evaluate integrals

Course Title: Linear Algebra

Course Code:MAA210

Linear Algebra	CO1	Learn in depth Vector Spaces, Subspaces	90
	CO2	Understand the classification and characteristics of Determinants	80
	CO3	Learn in details Inner Products and Norms with examples	90
	CO4	Deliberate the details of normal and Self-Adjoint Operators	80
	CO5	Analyse the classification and characteristics of The Diagonal form, The Triangular form and its applications	100

Course Title: Algebra -II

Course Code:MAB010

Algebra II	CO1	Assess properties implied by the definitions of rings	100
	CO2	Analyze and demonstrate examples and properties of ideals and quotient rings	80
	CO3	Demonstrate knowledge of polynomial rings and associated properties	90
	CO4	Derive and apply Gauss Lemma, Eisenstein criterion for irreducibility of rationals with examples	90
	CO5	Understand the characteristic of a field and the prime subfield	80

Course Title: Real Analysis -III

Course Code:MAB020

Real Analysis III	CO1	Deliberate in details with examples Sequences and series of functions	100
	CO2	Understand the characteristics of Uniform convergence continuity, differentiation and integration with examples	80
	CO3	Identify in details with examples Improper integrals and their convergence	90
	CO4	Understand in depth Functions of several variables	80
	CO5	Specify the details of Taylor's theorem, the Maxima and Minima	90

Course Title: Complex Analysis -II

Course Code:MAB030

Complex Analysis-II	CO1	Understand in details with application-the residue theorem, evaluation of definite integrals	100
	CO2	Understand in details with properties of harmonic functions	90
	CO3	Understand in depth of power series expansions, Weierstrass theorem	80
	CO4	Learn in detail with examples-partial fractions, study the characteristics of infinite products, canonical products	80
	CO5	Study the characteristics of the gamma and beta functions, and entire functions	90

Course Title: Ordinary and Partial Differential Equations

Course Code:MAB210

ODPDE	CO1	Solve problems in ordinary differential equations, dynamical systems, stability theory and a number of applications to scientific and engineering problems	100
	CO2	The study of Differential focuses on the existence and uniqueness of solutions also emphasizes the rigorous justification of methods for approximating solutions in pure and applied mathematics by using power series method some polynomials.	80
	CO3	Recognize the major classification of PDEs and the qualitative differences between the classes of equations	90
	CO4	Be competent in solving linear PDEs using classical solution methods.	90
	CO5	Theory of differential equations is widely used in formulating many fundamental laws of physics and chemistry.	100

Course Title: Graph Theory**Course Code:**MAB230

Graph theory	CO1	Construct examples and proofs pertaining to the basic theorems	80
	CO2	Understand the characteristics of external graphs, intersection graphs, operations on graph	90
	CO3	Write down in detail with examples of cut points, bridges, blocks and block graph	80
	CO4	Specify the characteristics of trees, centers, and centroids, spanning tree	90
	CO5	Identify the details of connectivity and the line connectivity, coverings, independence	100

Course Title: Elements of Functional Analysis**Course Code:**MAC010

Elements Functional Analysis	CO1	Explain the fundamental concepts of functional analysis.	100
	CO2	Understand the approximation of continuous functions on linear spaces	90
	CO3	Understand concepts of Hilbert and Banach spaces	90
	CO4	Understand the definitions of linear functional and prove the Hahn-Banach theorem, open mapping theorem, uniform boundedness theorem, etc.	80
	CO5	Define linear operators, self adjoint, isometric and unitary operators on Hilbert spaces	80

Course Title: Topology-I**Course Code:**MAC020

Topology-I	CO1	Deliberate in details with applications, topological spaces, basis for a topology, the order topology, subspace topology and product topology	80
	CO2	Learn in depth with closed set and limit point, continuous functions(defined in terms of open sets)	90
	CO3	Learn in details with examples-the product topology ,metric topology, quotient topology	100
	CO4	Understand in depth connected spaces , connected sets on the real line , path connectedness	90
	CO5	Deliberate the characteristics of compact spaces, compact sets on the real line, limit point compactness, local compactness	80

Course Title: Commutative Algebra**Course Code:**MAC210

Commutative Algebra	CO1	Understand in depth commutative ring and local rings with examples	100
	CO2	Learn the characteristics of Nil radical and Jacobson radical and prime spectrum of a ring	80
	CO3	Understand the characteristics of Noetherian and Artinian module	90
	CO4	Identify in details with examples Free modules, Finitely generated modules, Simple modules, Exact sequences of modules	80
	CO5	Specify the characteristics of Noetherian rings and Artinian rings	90

Course Title: Theory of Numbers**Course Code:**MAC220

Theory of Numbers	CO1	Know the diophantine equations, prime numbers, irrational numbers and prime-factorization	80
	CO2	Define and interpret the concepts of Arithmetical Functions and Dirichlet product of Arithmetical functions	90
	CO3	Provide precise definitions and appropriate examples and counter examples of Representation of a number by two or four squares, Fibonnaci and perfect number	100
	CO4	Know the continued fractions	90

Course Title: Basic Mathematics**Course Code:**MACC660

Basic Mathematics	CO1	Write an argument using logical notation and determine if the argument is or is not valid	80
	CO2	Identify sets as well defined collections, represents sets in roster and set builder form,	100
	CO3	CO3 Identify the subsets of the given sets, find the complement of a subset of a given Set, within a given universe. Represent venn diagram using sets.	100
	CO4	Use the simple method to solve small linear programming models by hands, given a basic feasible point	90
	CO5	Understand the definitions of graphs, path, connectedness, cut vertex, bridge, blocks of a graph.	90
	CO6	Study the properties of trees and matrix of a graph	80

Course Title: Measure and Integration**Course Code:MAD010**

Measure and Integration	CO1	Understand in details with examples Lebesgue measure, outer measure	100
	CO2	Learn the characteristics of measurable sets and measurable functions	90
	CO3	Deliberate in details with examples of Integration of measurable functions	90
	CO4	Learn in details with examples, functions of bounded variation, differentiation of an integral, absolute continuity	80
	CO5	Understand in depth the general measure theory	90

Course Title: Topology-II**Course Code:MAD020**

Topology-II	CO1	Deliberate the classification and characteristics of the countability axioms , the separation axioms	90
	CO2	Understand the details of Urysohn's lemma , Tietze's extension theorem, partitions of unity	90
	CO3	Discuss Tychonoff's theorem, local finiteness, Paracompactness	100
	CO4	Familiar with the construction of the fundamental group of a topological space and applications to covering spaces	80

Course Title: Differential Geometry**Course Code:MAD230**

Differential Geometry	CO1	To introduce the fundamentals of differential geometry primarily by focussing on the theory of curves and surfaces in three space.	90
	CO2	To compute quantities of geometric interest such as curvature, as well as develop a facility to compute in various specialized systems	100
	CO3	The theory of surfaces introduces the fundamental quadratic forms of a surface, intrinsic and extrinsic geometry of surfaces, and the Gauss theorem	90
	CO4	Introduce the method of the moving frame and overdetermined systems of differential equations as they arise in surface theory.	80

Course Title: Theory of Partitions **Course Code:**MAD220

Theory of Partitions	CO1	Know the definitions of partitions , Euler's theorem on $p(n)$	100
	CO2	CO2 Apply the q-binomial theorem and Ramanujan ${}_1\psi_1$ - summation formula	80
	CO3	Know the congruence of partition	90
	CO4	To apply the q-series	80

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: PG

Programme Name: Computer Science

Programme Code: MCSC01

Session/Year - 2019-20

List of POs & PSOs

POID	PO Statement
PO1	Identify, formulate, and solve computer science problems
PO2	Design, implement, test, and evaluate a computer system, component, or algorithm to meet desired needs
PO3	Receive the broad education necessary to understand the impact of computer science solutions in a global and societal context
PO4	Communicate effectively
PO5	Success in research or industry related to computer science
PSO1	Programmers or the Software Engineers with the sound knowledge of practical and theoretical concepts for developing software.
PSO2	Serve as the Computer Engineers with enhanced knowledge of computers And its building blocks. Work as the Hardware Designers/Engineers with the knowledge of Networking Concepts.
PSO3	Work as the System Engineers and System integrators Serve as the System Administrators with thorough knowledge of DBMS.
PSO4	Work as the Support Engineers and the Technical Writers
PSO5	Work as IT Sales and Marketing person.
PSO6	Serve as the IT Officers in Banks and cooperative societies.
PSO7	Computer Scientist in research and R & D laboratories.

Course Title: DATA STRUCTURES & ALGORITHMS

Course Code: CSA100

List of COs

CO ID	CO Statement
CO1	Select appropriate data structures as applied to specified problem definition.
CO2	Implement operations like searching, insertion, and deletion, traversing mechanism etc. on various data structures.
CO3	Implement Linear and Non-Linear data structures.
CO4	Implement appropriate sorting/searching technique for given problem.
CO5	Design advance data structure using Non Linear data structure.

Course Title: System Software

Course Code: CSA110

List of COs

CO ID	CO Statement
CO1	Understand fundamentals of language processing and grammar
CO2	Apply knowledge of compilation and code optimization steps to mimic a simple compiler
CO3	Demonstrate the working of various system software like assembler, loader, linker, editor and device driver

Course Title: Computer Networks

Course Code: CSA120

List of COs

CO ID	CO Statements
CO1	Master the terminology and concepts of the OSI reference model and the TCP-IP reference model.
CO2	Study the basic taxonomy and terminology of the computer networking and enumerate the layers of OSI model and TCP/IP model.
CO3	Master the concepts of protocols, network interfaces, and design/performance issues in local area networks and wide area networks
CO4	Acquire knowledge of Application layer and Presentation layer paradigms and protocols.
CO5	Study Session layer design issues, Transport layer services, and protocols.

Course Title: Discrete Mathematics

Course Code:CSA260

List of COs

CO ID	CO Statements
CO1	Construct simple mathematical proofs and possess the ability to verify them.
CO2	Have substantial experience to comprehend formal logical arguments .
CO3	Skillfull in expressing mathematical properties formally via the formal language of propositional logic and predicate logic.
CO4	Specify and manipulate basic mathematical objects such as sets, functions, and relations and will also be able to verify simple mathematical properties that these objects possess.
CO5	Apply basic counting techniques to solve combinatorial problems .

Course Title: Java Programming

Course Code:CSA270

List of COs

CO ID	CO Statement
CO1	Understand concept of Object Oriented Programming & Java Programming
CO2	Understand basic concepts of Java such as operators, classes, objects, inheritance, packages ,Enumeration and various keywords.
CO3	Understand the concept of exception handling and Input/Output operations.
CO4	Design the applications of Java & Java applet.
CO5	Analyze & Design the concept of Event Handling and Abstract Window Toolkit.

Course Title: Analysis and Design of Algorithms

Course Code:CSB060

List of COs

CO ID	CO Statement
CO1	Analyze different scenarios for running time of algorithms using asymptotic notations and Design using Recursion.
CO2	Apply divide and conquer strategy for design of various algorithms.
CO3	Develop algorithms for well known problems using greedy methods.
CO4	Describe and apply dynamic-programming approach for designing graph and matrix based algorithms.
CO5	Understand the concept of backtracking for traversal and search algorithms.

Course Title: Operating System and UNIX

Course Code:CSB070

List of COs

CO ID	CO Statement
CO1	Understand device drivers
CO2	Write applications with improved performance and stability
CO3	Write set of small commands and utilities that do specific tasks well
CO4	Run multiple programs each at the same time without interfering with each other or crashing the system.
CO5	Implement Commands of UNIX.

Course Title: Computer Graphics

Course Code: CSB080

List of COs

CO ID	CO Statement
CO1	Utilize the components of a graphics system and become familiar with building approach of graphics system components and algorithms related with them.
CO2	Learn the basic principles of 3- dimensional computer graphics.
CO3	Provide an understanding of how to scan convert the basic geometrical primitives, how to transform the shapes to fit them as per the picture definition.
CO4	Provide an understanding of mapping from a world coordinates to device coordinates, clipping, and projections
CO5	Implement the applications of computer graphics concepts in the development of computer games, information visualization, and business applications

Course Title: Graph Theory

Course Code: CSB270

List of COs

CO ID	CO Statement
CO1	Explain basic concepts in combinatorial graph theory
CO2	Define how graphs serve as models for many standard problems
CO3	Discuss the concept of graph, tree, Euler graph, cut set and Combinatorics.
CO4	See the applications of graphs in science, business and industry.

Course Title: .NET Technologies

Course Code:CSB280

List of COs

CO ID	CO Statement
CO1	Design web applications using .NET
CO2	Use .NET controls in web applications.
CO3	Debug and deploy .NET web applications
CO4	Create database driven .NET web applications and web services
CO5	Analyze & Design the concept of Event Handling and Abstract Window Toolkit.

Course Title: Software Engineering

Course Code: CSC040

List of COs

CO ID	CO Statement
CO1	Understand the nature of software development and software life cycle process models, agile software development, SCRUM and other agile practices.
CO2	Learn methods of capturing, specifying, visualizing and analyzing software requirements.
CO3	Understand concepts and principles of software design and user-centric approach and principles of effective user interfaces.
CO4	Basics of testing and understanding concept of software quality assurance and software configuration management process.
CO5	Understand need of project management and project management life cycle.

Course Title: Database Management System

Course Code: CSC060

List of COs

CO ID	CO Statement
CO1	Explain the features of database management systems and Relational database.
CO2	Design conceptual models of a database using ER modelling for real life applications and also construct queries in Relational Algebra.
CO3	Create and populate a RDBMS for a real life application, with constraints and keys, using SQL.
CO4	Retrieve any type of information from a data base by formulating complex queries in SQL.
CO5	Analyze the existing design of a database schema and apply concepts of normalization to design an optimal database.

Course Title: Theory of Languages

Course Code: CSC070

List of COs

CO ID	CO Statement
CO1	Design different types of Finite Automata and Machines as Acceptor, Verifier and Translator.
CO2	Understand, design, analyze and interpret Context Free languages, Expression and Grammars.
CO3	Design different types of Push down Automata as Simple Parser.
CO4	Design different types of Turing Machines as Acceptor, Verifier, Translator and Basic computing machine

Course Title: Computer Fundamentals

Course Code: CSC630

List of COs

CO ID	CO Statement
CO1	. Use technology ethically, safely, securely, and legally.
CO2	. Identify and analyze computer hardware, software, and network components
CO3	. Design basic business web pages using current HTML/CSS coding standards
CO4	. Install, configure, and remove software and hardware.

Course Title: Data Mining

Course Code:CSD230

List of COs

CO ID	CO Statement
CO1	Demonstrate an understanding of the importance of data mining and the principles of business intelligence
CO2	Organize and Prepare the data needed for data mining using pre -processing techniques
CO3	Perform exploratory analysis of the data to be used for mining.
CO4	Implement the appropriate data mining methods like classification, clustering or Frequent Pattern mining on large data sets.
CO5	Define and apply metrics to measure the performance of various data mining algorithms.

Course Title: Internet Technology

List of COs

CO ID	CO Statement
CO1	Develop analytical ability in network technology
CO2	Create quality websites
CO3	Work individually as a web designer and set up their own business
CO4	Get the job opportunities in most companies for professional web designers and build websites more visually elegant and interactive
CO5	Implement interactive web page(s) using HTML, CSS and JavaScript.

ANNEXURE I: Lists of PO, PSO and
Cos PO M.SC. BOTANY (2019-
2020)

Sl. No.	POID	PO
1	BOT20PO1	Conduct investigations of complex problems by the use of research-based knowledge on an independent term project.
2	BOT20PO2	Transfer of appropriate knowledge and methods from one topic to another within the subject.
3	BOT20PO3	Carry out practical work, in the field and in the laboratory, with minimal risk.
4	BOT20PO4	Able to think logically and organize tasks into a structured form and assimilate knowledge and ideas based on wide reading of text books and through the internet.
5	BOT20PO5	Apply the scientific knowledge of basic science, life sciences and fundamental process of plants to study and analyze any plant form.
6	BOT20PO6	Knowledge and understanding of the range of plant biology in terms of structure, function and environmental relationships.
7	BOT20PO7	Apply reasoning informed by the contextual knowledge to assess plant diversity, and the consequent responsibilities relevant to the biodiversity conservation Practice.

PSOM.SC.BOTANY(2019-2020)

Sl. No.	COURSE	PSOID	PSO
1.	Algal Biology and Biotechnology	BOA230	Phylogeny, thallus organization, economic and ecological importance of algal community
2.	Biochemistry and Plant Physiology	BOC030	Biomolecules, metabolic pathways and stress physiology in plants
3.	Cell Biology and Genetics	BOB020	Cell originals and Mendelian principles
4.	Ecology, Conservation Biology and Phytogeography	BOD010	Diversity of vegetation, distribution and its conservation
5.	Economic Botany	BOB220	Economic values of different crop plants and their applications
6.	Major Project	BOD020	Hands on experience in various fields of plant science
7.	Molecular Biology	BOC040	Molecular level organization in prokaryotes and eukaryotes with respect to various mechanisms involved
8.	Plant Anatomy and Histochemistry	BOB210	Anatomical features and organization of cells in plants
9.	Plant Breeding and Evolutionary Biology	BOB030	Plant breeding methods, procedures and their application for crop improvement
10.	Plant Biotechnology	BOC050	Tissue culture techniques and its application in development of resistant varieties
11.	Plant Propagation and Plant Breeding	BOC230	Propagation methods and plant breeding procedures and their application in different fields
12.	Plant Propagation Techniques	BOC640	Propagation methods and procedures and their application in different fields
13.	Phycology, Bryophytes, Pteridophytes and Gymnosperms	BOA050	Distribution, classification and phylogeny of lower plant communities
14.	Phytopathology	BOA240	Concepts of plant diseases defense mechanisms in plants and study of plant diseases
15.	Reproductive Biology of Angiosperms and Plant Morphogenesis	BOB010	Embryological study of growth and development using plant models
16.	Seed Technology	BOD210	Industrial scale processing of seeds up to marketing
17.	Systematics of Angiosperms	BOA060	Angiospermic plant family study with their phylogeny
18.	Virology, Bacteriology, Mycology and Plant Pathology	BOA040	Diversity, distribution of microorganism with respect to their economic aspects

COM.SC.BOTANY(20
19-2020)

Sl. No.	COURSE	COID	CO
1.	Algal Biology and Biotechnology	BOA2301	Specify in depth of thallus organization and phylogeny in algae
2.	Algal Biology and Biotechnology	BOA2302	Understand the details of toxins, blooms and distributions of algae
3.	Algal Biology and Biotechnology	BOA2303	Deliberate in depth about cultivation and marketing of algae
4.	Algal Biology and Biotechnology	BOA2304	Specify the details of Algal products and uses
5.	Biochemistry and Plant Physiology	BOC0301	Learn in details with biomolecules and their function
6.	Biochemistry and Plant Physiology	BOC0302	Understand in depth about solute transport and photosynthesis in plants
7.	Biochemistry and Plant Physiology	BOC0303	Specify the details of metabolism of nitrogen, lipids and plant hormones
8.	Biochemistry and Plant Physiology	BOC0304	Understand in depth about Stress physiology
9.	Cell Biology and Genetics	BOB0201	Learn in detail about cell membrane transport and proteins
10.	Cell Biology and Genetics	BOB0202	Deliberate the Functions of cell organelles, programmed cell death
11.	Cell Biology and Genetics	BOB0203	Specify the extensions of Mendelian principles
12.	Cell Biology and Genetics	BOB0204	Learn about Sex determination and dosage compensation
13.	Ecology, conservation Biology and Phytogeography	BOD0101	Understand the diversity of ecosystem and types of ecosystems
14.	Ecology, conservation Biology and Phytogeography	BOD0102	Learn in details of pollution and environmental biology
15.	Ecology, conservation Biology and Phytogeography	BOD0103	Study the importance of biodiversity and conservation biology

16.	Ecology, conservation Biology and Phytogeography	BOD0104	Detailed study of phytogeography and crop distribution
17.	Economic Botany	BOB2201	Specify the details of cereals, millets, pulses, oil yielding plants and study of horticultural plants and floriculture
18.	Economic Botany	BOB2202	Deliberate the characteristics of sugar yielding plants, spices and condiments
19.	Economic Botany	BOB2203	Understand the importance of fiber, timber and gum yielding plant
20.	Economic Botany	BOB2204	Deliberate on the medicinal plants and their applications
21.	Major Project	BOD0201	Learn the details of literature survey and methodology in research
22.	Molecular Biology	BOC0401	Identify the characteristics of genetic materials and its replication
23.	Molecular Biology	BOC0402	Learn the details of molecular basis of mutation, repair and recombination
24.	Molecular Biology	BOC0403	Deliberate the details of RNA formation, processing of RNA and post-RNA
25.	Molecular Biology	BOC0404	Understand in depth of gene regulation in prokaryotes and eukaryotes
26.	Plant Anatomy and Histochemistry	BOB2101	Learn in details of primary vegetative body of the plants
27.	Plant Anatomy and Histochemistry	BOB2102	Deliberate in details of differentiation in vascular tissues and study of apical meristems in shoot and root
28.	Plant Anatomy and Histochemistry	BOB2103	Deliberate the characteristics of secondary growth
29.	Plant Anatomy and Histochemistry	BOB2104	Understand the details of plant histochemistry
30.	Plant Breeding and Evolutionary Biology	BOB0301	Learn in depth about plant breeding methods and techniques
31.	Plant Breeding and Evolutionary Biology	BOB0302	Understand the details of breeding for specific purposes
32.	Plant Breeding and Evolutionary Biology	BOB0303	Learn the details of Nature of evolution

33.	Plant Breeding and Evolutionary Biology	BOB0304	Identify the characteristics of variation and speciation
34.	Plant Biotechnology	BOC0501	Understand in depth about plant tissue culture and its techniques
35.	Plant Biotechnology	BOC0502	Specify the genetic engineering and tools used in it
36.	Plant Biotechnology	BOC0503	Understand the details of genetic manipulation, transgenic approaches to produce resistant plants
37.	Plant Biotechnology	BOC0504	Learn the details of engineering of crop plants for production of secondary metabolites
38.	Evolutionary biology	BOC2301	Learn the details of importance of plant propagation, vegetative propagation and micro propagation
39.	Evolutionary biology	BOC2302	Understanding of basic concepts of plant breeding and genetics
40.	Evolutionary biology	BOC2303	Study types, purposes of plant breeding
41.	Evolutionary biology	BOC2304	Deliberate study of advanced breeding aspects
42.	Plant Propagation Techniques	BOC6401	Learn the details of importance of plant propagation
43.	Plant Propagation Techniques	BOC6402	Understand in depth about types of vegetative propagation
44.	Plant Propagation Techniques	BOC6403	Learn the techniques of budding and layering
45.	Plant Propagation Techniques	BOC6404	Deliberate in details with examples of micro propagation in forestry and horticulture plants
46.	Phycology, Bryophytes, Pteridophytes and Gymnosperms	BOA0501	Understand the details of diversity, distribution, pigmentation and lifecycle of algae
47.	Phycology, Bryophytes, Pteridophytes and Gymnosperms	BOA0502	Deliberate in depth of Bryophytes lifecycle, classification, phylogeny and Economic importance
48.	Phycology, Bryophytes, Pteridophytes and Gymnosperms	BOA0503	Understand the details of Pteridophytes lifecycle, phylogeny, classification, economic importance and anatomy

49.	Phycology, Bryophytes, Pteridophytes and Gymnosperms	BOA0504	Write down in details with examples Gymnosperms history, reproduction, economic importance and interrelationship
50.	Phytopathology	BOA2401	Learn the details of the concept, causative agents and disease cycle of plant pathogens
51.	Phytopathology	BOA2402	Deliberate the details of defense mechanisms in plants and its genetics
52.	Phytopathology	BOA2403	Study of Management of plant diseases
53.	Phytopathology	BOA2404	Identify in details with examples of diseases in crop plants
54.	Reproductive Biology of Angiosperms and Plant Morphogenesis	BOB0101	Understanding the micro sporogenesis and historical overview
55.	Reproductive Biology of Angiosperms and Plant Morphogenesis	BOB0102	Specify in details with examples about mega sporogenesis, fertilization, endosperm and embryo
56.	Reproductive Biology of Angiosperms and Plant Morphogenesis	BOB0103	Specify the details of models and concepts of plant morphogenesis
57.	Reproductive Biology of Angiosperms and Plant Morphogenesis	BOB0104	Understand in details with examples of plant growth and development, photo morphogenesis
58.	Seed Technology	BOD2101	Understand the seed science and concepts
59.	Seed Technology	BOD2102	Study the seed production and processing methods
60.	Seed Technology	BOD2103	Learn about seed quality parameters and tests
61.	Seed Technology	BOD2104	Deliberate the procedure of seed certification
62.	Systematics of Angiosperms	BOA0601	Understand the principles and applications of Taxonomy of angiosperms
63.	Systematics of Angiosperms	BOA0602	Specify the details of taxonomic literature
64.	Systematics of Angiosperms	BOA0603	Deliberate in details with examples Dicot and monocot families and features of classification systems

65.	Systematicsof Angiosperms	BOA0604	Specify in details molecularsystematics withexamplesofsoftwares and databases
66.	Virology,Bacteriology, MycologyandPlant Pathology	BOA0401	Learn the classification andcharacteristics of viruses, viroids, prions and diseases of it
67.	Virology,Bacteriology, Mycology and Plant Pathology	BOA0402	Deliberateindetails with examples of Bacteria,archeabacteria, actinomycetesand mycoplasmaanditseconomicimportance
68.	Virology,Bacteriology, Mycology and Plant Pathology	BOA0403	SpecifytheFungaldiversity,lifecycleand economic importance of fungi
69.	Virology,Bacteriology, MycologyandPlant Pathology	BOA0404	Understandin details of etiology, distribution and management of plant disease

JSS COLLEGE OF ATRS, COMMERCE AND SCIENCE
OOTY ROAD MYSURU-25
PG DEPARTMENT OF PHYSICS
CO-ATTAINMENT 2019-20

COURSE	COURSE CODE	COID	CO'S
Classical Mechanics	PHY101	CO1	Deliberate the characteristics of Mechanics of a system of particles
		CO2	Specify in depth The Lagrangean method
		CO3	Learn in details with examples Central forces
		CO4	Write down the details of Hamilton's equations
		CO5	Deliberate the characteristics of Canonical transformations
Mathematical Methods of Physics 1	PHY102	CO1	Specify the characteristics of Curvilinear coordinates and Tensors
		CO2	Write down in depth Tensors
		CO3	Learn in details with application, if applicable, Differential equations, Hermite function and Laguerre functions
		CO4	Write down the details of Special functions
		CO5	Write down in details with application, if applicable, Bessel functions
Mathematical Methods of Physics 2	PHY103	CO1	Understand the classification and characteristics of Linear vector space
		CO2	Specify the characteristics of Linear representations of groups
		CO3	Deliberate in details with application, if applicable, Rotation group
		CO4	Understand the details of Fourier transforms
		CO5	Understand in details with examples Integral equations
Optics, Classical Electrodynamics, Plasma Physics	PHY104	CO1	Write down in details with examples Electric multipole moments
		CO2	Deliberate the characteristics of Potential formulation
		CO3	Specify in details with application, if applicable, Fields of moving charges and radiation
		CO4	Learn the characteristics of Radiating systems
		CO5	Learn the details of Relativistic electrodynamics
Continuum Mechanics and Relativity	PHY201	CO1	Write down the details of Continuum mechanics of solid media
		CO2	Understand the characteristics of Fluid mechanics
		CO3	Deliberate in details with examples Minkowski space-time
		CO4	Specify the classification and characteristics of Relativistic mechanics of a material particle
		CO5	Specify the characteristics of Einstein's equations

Thermal Physics	PHY202	CO1	Identify the classification and characteristics of Thermodynamics Preliminaries
		CO2	Deliberate in depth Entropy
		CO3	Specify in depth Phase equilibria
		CO4	Deliberate the characteristics of Classical Statistical Mechanics
		CO5	Deliberate the classification and characteristics of Quantum Statistical Mechanics
Quantum Mechanics 1	PHY203	CO1	Understand in depth The wave function and uncertainty Principle
		CO2	Specify in depth Formalism of quantum mechanics
		CO3	Understand the details of Schrodinger equation in one dimension
		CO4	Deliberate the details of Angular Momentum
		CO5	Understand in depth Schrodinger equation in three dimensions
Spectroscopy and Fourier Optics	PHY204	CO1	Specify the details of Atomic spectroscopy
		CO2	Identify in details with application, if applicable, Nuclear magnetic resonance
		CO3	Specify in depth Microwave spectroscopy
		CO4	Specify in depth Infrared spectroscopy
		CO5	Write down in details with application, if applicable, Raman spectroscopy
Quantum Mechanics 2	PHY301	CO1	Learn in details with application, if applicable, The time-independent perturbation theory
		CO2	Learn the characteristics of The Variational Principle
		CO3	Understand in details with application, if applicable, WKB Approximation
		CO4	Deliberate in details with examples Adiabatic approximation
		CO5	Deliberate in details with application, if applicable, Time-dependent perturbation theory
Condensed Matter Physics	PHY302	CO1	Write down the classification and characteristics of X-ray crystallography
		CO2	Identify in details with examples Atomic scattering factor
		CO3	Specify in details with examples Electron and neutron diffraction
		CO4	Identify in details with examples Crystal growth techniques
		CO5	Learn the details of Disordered materials
Nuclear and Particle Physics	PHY303	CO1	Specify in details with application, if applicable, Properties of the Nucleus
		CO2	Learn in details with application, if applicable, Nuclear Models
		CO3	Specify the characteristics of Nuclear reactions
		CO4	Deliberate in depth Nuclear decay modes
		CO5	Understand the classification and characteristics of Interaction of nuclear radiation with matter

Solid State Physics 1	PHY304	CO1	Specify in details with application, if applicable, basic concepts of properties of Solid
		CO2	Deliberate in details with application, if applicable, Dielectrics; Properties and classification
		CO3	Specify the classification and characteristics of Ferroelectrics; Properties and classification
		CO4	Specify the characteristics of thermal and vibrational properties of solids
		CO5	Learn the characteristics of tight-binding approximation
Nuclear Physics 1	PHY305	CO1	Specify in details with examples Nuclear detectors
		CO2	Understand in depth Nuclear pulse techniques
		CO3	Learn the details of Shell model
		CO4	Understand the classification and characteristics of Collective model
		CO5	Identify the classification and characteristics of Nilsson model
Solid State Physics 2	PHY401	CO1	Learn the details of X-ray diffraction by crystals
		CO2	Identify the details of Experimental techniques
		CO3	Deliberate in depth Structure analysis
		CO4	Learn the classification and characteristics of Particle Size study of Fibre structure
		CO5	Specify in depth Imperfections in solids
Solid State Physics 3	PHY402	CO1	Write down in details with application, if applicable, Free electron theory of metals
		CO2	Identify the characteristics of Electrical conductivity
		CO3	Deliberate in details with examples Hall effect
		CO4	Write down the classification and characteristics of Elemental and Compound Semiconductors
		CO5	Deliberate in details with application, if applicable, Carrier concentrations
Nuclear Physics 2	PHY403	CO1	Write down the details of nuclear fission
		CO2	Write down in details with application, if applicable, Neutron transport equation using elementary diffusion theory
		CO3	Specify the details of Fermi age theory
		CO4	Specify in depth homogeneous reactor
		CO5	Analyse the beta, gamma scattering
Nuclear Physics 3	PHY404	CO1	Write down the details of Deuteron
		CO2	Understand in details with application, if applicable, Deuteron magnetic and Quadrupole moments
		CO3	Understand the details of Nucleon-nucleon scattering processes
		CO4	Write down in details with examples Theory of scattering of slow neutrons
		CO5	Specify in details with examples Plane wave theory of direct reactions

Accelerator Physics	PHY407	CO1	Specify in details with application, if applicable, ion Source
		CO2	Deliberate the details of Alternating gradient machines
		CO3	Understand the working of Betatron
		CO4	Learn the details of Ion sources
		CO5	Write down the characteristics of Townsend theory
Electronics	PHYs	CO1	Learn analyzing digital and analog devices and circuits
		CO2	Analyze components associated with digital and analog electronic systems
		CO3	Demonstrate proficiency in the use of electronic equipment and devices
		CO4	Assist in the design, operation, and troubleshooting of electronic systems
		CO5	Analyze electronics devices and circuits using computer simulations

JSS COLLEGE OF ATRS, COMMERCE AND SCIENCEOOTY ROAD MYSURU-25
PG DEPARTMENT OF PHYSICS
PO-ATTAINMENT 2019-20

SUBJECT	COID	PO'S
MSc Physics	PO1	Identify, formulate and analyze complex problems using first principles.
	PO2	A research oriented learning to develop analytical problem-solving approaches.
	PO3	Understand the basic concepts, fundamental principles and the scientific Theories.
	PO4	Acquire skills in handling scientific instruments, planning and performing in laboratory experiments
	PO5	Think creatively in explaining solutions to the problems

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science (Autonomous)
Ooty Road, Mysuru - 570025
Outcome Attainments 2019-20
Department: BIOCHEMISTRY

Programme: B.Sc

Programme Code: BScBBM 07/ BScBMBt06

I SEMESTER

Course title	CO ID	CO
Fundamentals Of Chemistry And Molecules Of Life	CO1	Understand in detail with examples stereo-chemistry
	CO2	Specify the characteristics of carbohydrates & glycobiology
	CO3	Learn the characteristics of proteins
	CO4	Understand the classification and characteristics of vitamins

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
PO2	Understand the impact of the plant diversity in societal and environmental context
PO3	Demonstrate the knowledge of, and need for sustainable development
PO4	Use interdisciplinary approaches with quantitative skills to work on biological problems
PO5	Demonstrate the ability to justify and explain their thinking and/or approach
PO6	Develop state-of-the-art laboratory and professional communication skills
PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

II SEMESTER

Course title	CO ID	CO
Physiology	CO1	Understand in depth cardiovascular physiology
	CO2	Specify the characteristics of renal physiology
	CO3	Deliberate the detail of musculoskeletal system
	CO4	Learn the detail of reproductive physiology

PO ID	PO
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III SEMESTER

Course title	CO ID	CO
Enzymology & Bioenergetics	CO1	Learn the characteristics of enzyme kinetics
	CO2	Learn in depth enzyme inhibitions
	CO3	Specify in detail with examples enzyme activity
	CO4	Understand the classification and characteristics of bioenergetics

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
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IV SEMESTER

Course title	CO ID	CO
Metabolism	CO1	Specify the detail of metabolism of lipids
	CO2	Understand the detail of metabolism of carbohydrates
	CO3	Deliberate the characteristics of metabolism of proteins
	CO4	Understand the detail of metabolism of nucleic acids

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
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V SEMESTER

Course title	CO ID	CO
Nutritional Biochemistry	CO1	Understand the characteristics of energy metabolism
	CO2	Specify the characteristics of dietary carbohydrates
	CO3	Identify in detail with examples dietary lipid & health
	CO4	Understand the characteristics of minerals

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
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V SEMESTER

Course title	CO ID	CO
Tools and Techniques in biochemistry	CO1	Learn the detail of chromatography
	CO2	Understand the electrophoresis
	CO3	Specify the detail of centrifugation
	CO4	Learn the detail of spectroscopy

PO ID	PO
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VI SEMESTER

Course title	CO ID	CO
Plant biochemistry	CO1	Learn the detail of Nitrogen Metabolism
	CO2	Specify the characteristics of membranes
	CO3	Specify the detail of secondary metabolites
	CO4	Understand the Concepts Of photosynthesis

PO ID	PO
PO1	Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany
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PO7	Apply the scientific method to design, execute, and analyze an experiment
PO8	Explain scientific procedures and their experimental observations

JSS Mahavidyapeetha
JSS College of Arts, Commerce and Science
Ooty Road, Mysuru

Department: PG Kannada

Programme Name: MA Kannada

Programme Code: MKAN01

Session/Year: 2019-20

List of POs & PSOs

POID	PO Statement
PO1	Demonstrate critical reading, writing, and thinking skills. Write well developed, focussed and effective paragraphs, which support a clear thesis statement, and demonstrate competence in Standard Kannada usage.
PO2	Get the opportunity to opt for career in the field of social media
PO3	Helps to pursue research work at M.Phil and Doctoral level
PO4	Help to communicate effectively and fluently at various occasions
PO5	Analyse and interpret text written in Dravidian Language.
PO6	Learn to write logical and informative papers
PO7	Imbibe good ethics explored in the works of great writers.
PO8	Learn to participate effectively in debates, group discussions, seminars.

Course Title: Prachina Kannada Sahithya : Patya : Adipurana

Course Code: KNA010

List of COs

CO ID	CO Statement
CO1	Recognize and understand figurative language, such as allegory and metaphor, and literary techniques, like irony, rhyme, and allusion.
CO2	Identify the unique qualities of the authors studied, and compare and contrast them
CO3	Analyze literary works for their structure and meaning
CO4	Able to effectively communicate ideas related to the literary work

Course Title: Prachina Kannada Sahithyada Hinnele

Course Code: KNA020

List of COs

CO ID	CO Statement
CO1	To enable them to have a historical perspective of the development over the centuries. CO2: Identify the unique qualities of the authors studied, and compare and contrast them
CO2	Identify the unique qualities of the authors studied, and compare and contrast them
CO3	Demonstrate knowledge of the style, structure, and content of the assigned literary texts.
CO4	Develop a well-written argument about one or more literary texts or authors, and accurately cite literary and other sources

Course Title: Kannada Chandasinna Adhyayana

Course Code: KNA030

List of COs

CO ID	CO Statement
CO1	Familiar with Old Kannada Poetry
CO2	Adopt the correct reading of Old Kannada poetry
CO3	Identify the different forms of meters in the writings of poets of different genre
CO4	Learn to apply in creative literature

Course Title: Vimarsheya Adhyayana

Course Code: KNA040

List of COs

CO ID	CO Statement
CO1	Creates opportunity to nurture their ability to produce literary texts.
CO2	Helps to understand the process of communicating and interpreting human experience through literary representation
CO3	They learn to raise significant questions, gather relevant evidence, reach well-reasoned conclusions.
CO4	Students also develop an ethical orientation to living as their study of literature encourages them to value human actions, motivations, and differences.

Course Title: Bashavignanada Mulatatvagalu

Course Code: KNA210

List of COs

CO ID	CO Statement
CO1	They have the ability to analyse and interpret all aspects of language phenomena
CO2	Able to understand the concepts, theories, and methodologies used by linguists
CO3	Helps in qualitative and quantitative analyses of linguistic structure, and patterns of language use.
CO4	Developes a significant capacity for adaptation and the ability to question and engage in professional practice

Course Title: Madhyakaleena Kannada Sahithya : Patya

Course Code: KNB010

List of COs

CO ID	CO Statement
CO1	Able to understand the background for the linguistic situation of the period.
CO2	Appreciate the representative poets, novelists and works of Kannada literature
CO3	Identify and describe distinct literary characteristics of the literature of this time period
CO4	Able to analyze and interpret texts.

Course Title: Madhyakaleena Kannada Sahithya Hinnele

Course Code: KNB020

List of COs

CO ID	CO Statement
CO1	Helps to understand the historical and cultural contexts of the literature of this period to some major authors, works, and genres
CO2	Imbibe good ethics explored in the works
CO3	Helps to Identify the key elements that are distinctive to the artistic achievement of early modern writers.
CO4	Reflect and write analytically about the literary texts and their contexts.

Course Title: Dravida Bashavijayana

Course Code: KNB030

List of COs

CO ID	CO Statement
CO1	Earn knowledge on the Origin and Growth of Dravidian Languages
CO2	Develope the skill to write in traditional form
CO3	Acquire knowledge to analyse Old Kannada Literature
CO4	Able to make the comparative analysis of Dravidian Literature

Course Title: Kannada Vimarshe : Ayda Lekhanagalu

Course Code: KNB040

List of COs

CO ID	CO Statement
CO1	Understand the growth of Kannada Criticism
CO2	Able enough to evaluate the present genre writings
CO3	Understand to view literature in different dimensions
CO4	Learn to write analytically about the literary text and their contexts

Course Title: Kannada Vyakarangala Thoulanika Samikshe

Course Code: KNB210

List of COs

CO ID	CO Statement
CO1	Able to lidentify the different ways in which grammar has been described.
CO2	Imply the use of grammar and vocabulary in speech and writing
CO3	Learn how to analyze unfamiliar words by understanding the structure of the Language.
CO4	Increase confidence in their ability to read, comprehend, organize, and retain written information.

Course Title: Kannada Samskurthi Chinthane **Course Code:** KNB220

List of COs

CO ID	CO Statement
CO1	Acquire knowledge of Different phases of Kannada Culture
CO2	Understand and adopt the values of Rich Heritage of Kannada Culture
CO3	Understand the relation between Kannada Language and Culture
CO4	Read and analyse the opinions of famous intellectuals about Kannada Culture

Course Title: Thulanika Sahithya : Kavya mattu Nataka

Course Code: KNC010

List of COs

CO ID	CO Statement
CO1	Explore the connections of literature with history, philosophy, politics, and literary theory
CO2	Analyze literary works from various genres for their structure and meaning, using correct terminology
CO3	Develop multi-dimensional characters
CO4	Help to interact, with other cultural forms of literature.

Course Title: Adunika Kannada Sahithyada Hinnele

Course Code: KNB020

List of COs

CO ID	CO Statement
CO1	Develops new thinking on modern writers and their writings.
CO2	Identify and describe distinct literary characteristics of 20th century literature
CO3	Effectively communicate ideas related to the literary works
CO4	Integrate source material into research papers smoothly

Course Title: Bharatiya Kavya Mimamse

Course Code: KNB030

Name of Course In-charge/Coordinator: Dr. Shivakumar D B

List of COs

CO ID	CO Statement
CO1	Helps to unfold new spheres of study and research
CO2	Understand Indian poetics with its speciality of literary devices, Helps to gain knowledge of poetry as a literary genre.
CO3	Able to Identify and describe distinct literary characteristics of poetic forms
CO4	Able to analyse poetic works for their structure and meaning, using correct terminology

Course Title: Samashodana vidyana mattu Ganaka Gyana

Course Code: KNC040

List of COs

CO ID	CO Statement
CO1	Understand the Research methodology of Kannada Studies
CO2	Understand the historical background of Kannada Research
CO3	Learn to utilize the application of the computers
CO4	Learn the application of computers in Social media

Course Title: Upabasha Vijyayana

Course Code: KNC210

List of COs

CO ID	CO Statement
CO1	Understand various Kannada Dialects.
CO2	Learn the Phonetics of Kannada Dialects
CO3	Attempt to collect local dialects through field visits by solving survey problems
CO4	Analyse the different phases of the growth of kannada dialects.

Course Title: Adunika Kannada Sahithya : Patya

Course Code: KND010

List of COs

CO ID	CO Statement
CO1	Learn different phases of the growth of Kannada novels and poems.
CO2	Understand the diverse themes according to period.
CO3	Create interest to opt these in their research work.
CO4	Motivate young writers.

Course Title: Pacshatiya Kavya Mimamse

Course Code: KND020

List of COs

CO ID	CO Statement
CO1	Acquire knowledge on western literary criticism.
CO2	Analyse the influence of western literary criticism on Kannada literature.
CO3	Develop analytical skills.
CO4	Identify the difference between eastern and western criticism.

Course Title: Samuha Madyama

Course Code: KND030

List of COs

CO ID	CO Statement
CO1	Gather knowledge on social and mass media.
CO2	Understand the working knowledge about AIR, TV Channels, cinemas and press media.
CO3	Enhanced communicative skills help in carrier opportunity.
CO4	Able to work in various positions in media sector.

Course Title: Avadika Karya

Course Code: KND040

List of COs

CO ID	CO Statement
CO1	Understand the research methodology.
CO2	Implement the knowledge in their project work.
CO3	Learn editing skills.
CO4	Helps to pursue doctoral research.

Course Title: Kannada Basha Swaroop : Patya

Course Code: KND210

List of COs

CO ID	CO Statement
CO1	Develop the ability to analyse and interpret all aspects of language phenomena
CO2	Able to understand the concepts, theories, and methodologies used by linguists.
CO3	Helps in qualitative and quantitative analyses of linguistic structure, and patterns of language use.
CO4	Developes a significant capacity for adaptation and the ability to question and engage in professional practice