DEPARTMENT OF COMPUTER SCIENCE
COURSE OUTCOMES
COMPUTER FUNDAMENTALS AND PHOTOSHOP

Course Outcomes

CO1: Explain the basic knowledge of computer hardware and software.(K3)
CO2: Practice and work on Adobe Photoshop Applications. (K3)
CO3: Create and edit photo albums. (K6)
CO4: Design and edit Banners and visiting cards etc. (K6)

PROBLEM SOLVING IN 'C'

Course Outcomes

CO1: Demonstrate the working of a digital computer. (K3)
CO2: Analyse a given problem and develop an algorithm to solve the problem. (K4)
CO3: Apply the 'C' language constructs in the right way. (K3)
CO4: Design, develop and test programs written in 'C'. (K6)

PROBLEM SOLVING IN 'C' PRACTICAL

Course Outcomes

CO1: Develop problem solving, logic development techniques. (K3)
CO2: Construct flowcharts/ develop algorithms for the given problems.(K3)
CO3: Develop programs in 'C' language. (K6)
CO4: Correlate the program with possible solutions. (K4)
CO5: Test the program manually with some test data. (K4)
CO6: Evaluate the program by executing it. (K5)

OBJECT ORIENTED PROGRAMMING USING JAVA

Course Outcomes

CO1: Explain the concept and underlying principles of Object-Oriented Programming. (K3)
CO2: Demonstrate how Object-Oriented concepts are incorporated into the Java programming language. (K3)
CO3: Develop problem-solving and programming skills using OOP concept. (K3)
CO4: Develop programming skills in the Java language. (K3)

OBJECT ORIENTED PROGRAMMING USING JAVA LAB

Course Outcomes:

CO1: Develop problem solving, logic development techniques. (K3)
CO2: Construct flowcharts/develop algorithms for the given problems. (K3)
CO3: Develop programs in Java. (K6)
CO4: Correlate the program with possible solutions.(K4)
CO5: Test the program manually with some test data. (K4)
CO6: Evaluate the program by executing it. (K5)

DATA STRUCTURES

Course Outcomes

CO1: Explain how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and its applications. (K3)
CO2: Develop programs that use arrays, records, linked structures, stacks, queues, trees, and graphs.(K3)
CO3: Compare and contrast the benefits of dynamic and static data structures implementations.(K4)
CO4: Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack. (K2)

CO5: Discuss the computational efficiency of the principal algorithms for sorting, searching and hashing. (K2)

DATA STRUCTRURES USING 'C' LAB

Course Outcomes:

CO1: Develop problem solving, logic development techniques. (K3)
CO2: Construct flowcharts/Develop algorithms for the given problems. (K3)
CO3: Develop programs using Data structures in 'C'. (K6)
CO4: Correlate the program with possible solutions. (K4)
CO5: Test the program manually with some test data. (K4)
CO6: Evaluate the program by executing it. (K5)

DATA STRUCTURES USING JAVA LAB

Course Outcomes:

CO1: Develop problem solving, logic development techniques. (K3)
CO2: Develop programs in Data Structures using Java. (K6)
CO3: Correlate the program with possible solutions. (K4)
CO4: Test the program manually with some test data. (K4)
CO5: Evaluate the program by executing it. (K5)

DATABASE MANAGEMENT SYSTEMS

Course Outcomes

CO1: Determine database structure and its design. (K3)
CO2: Explain different data models used for database design. (K3)
CO3: Correlate database transactions and data recovery. (K4)
CO4: Employ DML, DDL, DCL commands to manipulate data in the database. (K3)

DBMS PRACTICAL

Course Outcomes:

CO1: Determine database structure and its design. (K3)
CO2: Explain different data models used for database design. (K3)
CO3: Correlate database transactions and data recovery. (K4)
CO4: Employ DML, DDL, DCL commands to manipulate data in the database. (K3)

SOFTWARE ENGINEERING

Course Outcomes

CO1: Ability to deduce and specify requirements of the software projects. (K4)
CO2: Analyse software requirements with existing tools. (K4)
CO3: Differentiate different testing methodologies and apply the basic project management practices in real life projects. (K4)
CO4: Adapt himself/herself to work in a team as well as independently on software projects. (K6)

PRACTICAL

Course Outcomes

CO1: Develop skills to work in emerging/latest technologies. (K6)
CO2: Apply theoretical and practical tools/techniques to solve life problems. (K3)
CO3: Plan, analyse, design and implement the project. (K4,K5, K6)

WEB TECHNOLOGIES

Course Outcomes

CO1: Demonstrate the web architecture and web services. (K3)
CO2: Practice latest web technologies and tools by conducting experiments. (K3)
CO3: Design interactive web pages using HTML and style sheets. (K6)
CO4: Determine the framework and building blocks of .NET Integrated Development Environment. (K3)

CO5: Prepare solutions by identifying and formulating IT related problems. (K6)

WEBTECHNOLOGIES LAB

Course Outcomes:

CO1: Create forms using HTML. (K6)
CO2: Create Files using HTML. (K6)
CO3: Create Style sheets using HTML. (K6)
CO4: Create tables using HTML.(K6)
CO5: Create Web pages using HTML.(K6)

DISTRIBUTED SYSTEMS

Course Outcomes

CO1: Create models for distributed systems. (K6)
CO2: Apply different techniques learned in the distributed system. (K4)
CO3: Develop the concepts of Inter-process communication. (K3)
CO4: Develop the concepts of Distributed Mutual Exclusion and Distributed Deadlock Detection algorithm. (K3)

CLOUD COMPUTING

Course Outcomes

CO1: Compare the strengths and limitations of cloud computing. (K4)
CO2: Illustrate the architecture, infrastructure and delivery models of cloud computing. (K4)
CO3: Apply suitable virtualization concept. (K5)
CO4: Devise the appropriate cloud player, Programming Models and approach. (K4)
CO5: Correlate the core issues of cloud computing such as security, privacy and interoperability.(K4)
CO6: Design Cloud Services and Set a private cloud. (K6)

PROJECT SEM-VI

Course Outcomes:

CO1: Develop programming language concepts, particularly Java and Object-oriented concepts. (K3)
CO2: Plan, analyze, design and implement a software project or gather knowledge over the field of research and design or plan about the proposed work. (K4,K6)

CO3: Demonstrate the ability to locate and use technical information from multiple sources.(K3)
CO4: Demonstrate the ability to communicate effectively in speech and writing. (K3)
CO5: Organise to work as a team and focus on getting a working project done on time with each student being held accountable for their part of the project. (K4)
CO6: Demonstrate software development cycle with emphasis on different processes – requirements, design and implementation phases. (K3,K4,K5,K6)

COMPUTER FUNDAMENTALS AND OFFICE TOOLS
(II Semester - common to all)

Course Outcomes

CO1: After the successful completion of course the student would have thorough knowledge about concept and principles of computer fundamentals. Student would be in a position to work with MS Office Word, MS Excel and Power Point presentations.

INTERNET FUNDAMENTALS AND WEB TOOLS
(III SEMESTER – COMMON TO ALL)

Course Outcomes

CO1: After the successful completion of course the student should have thorough knowledge about concept and principles of internet fundamentals and Web Tools and Web Applications.

DEPARTMENT OF BOTANY
SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Course outcomes

Sno	Semester	Paper	Course Code	Title of the paper
1	I	l	1106	Microbial diversity algae and fungi
2	Il	ll	2106	Diversity of archaegoniates&plant

				anotomy
3	Ill	lll	3106	Plant Taxonomy and embryology
4	IV	IV	4106	Plant physiology and metabolism
5	V	V	5133	Cell biology,genetics&plant breeding
6	V	Vl	5134	Plant ecology &phytogeography
7	IV	Vll	6143	Plant tissue culture and it's biotechnological applications

Paper - I .Microbial diversity, Algae & Fungi

- The Course introduction to origin and evolution of life, the student learns formation of earth in the universe and existence of life on earth.
- Students comes to know about microbial diseases regarding to various micro organism in man, animals and plants.
- The algae group of plants gives an vast knowledge to growing the populations with its lot of Economic importance as food, fodder and feed etc.,
- Student gain knowledge of fungi as pathogen causing many famines as in the past and to overcome and manage the fungal disease and protect the life forms on the earth.
- seed sowing, soil preparation in suitable way for proper growth &development candidates should work for long hours ,mostly in sensitive areas like forest .student can go for master degrees &research programs.
- Often job opportunities, at B.sc level also job –opportunities &begin our business also, given base knowledge for higher degree in programme, can be an advisor to farmers –govt. job smaintainly land scape ,parks ,public greenery ,official lawns &many bio diversity basis.
- Self-Employment and manage new nurseries

Paper-ll Diversity of archaegoniates & plant Anotomy

* Student understands on the organisation of tissues and tissue systems in plants.
* Correlate the importance of diversity and consequences due to its loss
* Study of economic importance-teak, red sanders and rosewood

Paper - lll Plant Taxonomy and Embryology

- Every citizen and students acquire the knowledge of classification of the plants and the comparison, origin and evolution of angiosperms which are the most important species in our daily life.
- The students to know the acquired knowledge to maintain botanical garden worldwide.
- To acquired the knowledge of the development of embryo, structure, pollination and fertilization methods to develop with new genetically combinations leading to new varieties.

Paper - lV Plant physiology and metabolism

* Comprehensive the importance of water in plant life and mechanism of water and solutes in plant's evolute the role of minerals in plant nutrition and their deficiency symptoms.

* Interpret the role of enzymes in plant metabolism .

* Critically under stand the light reactions and Corbon assimilation process responsible for synthesis of food in plant's.

*Analyze the biochemical reactions in relation to nitrogen and lipid metabolism.

*Evolute the physiological factors that regulate growth and development in plant's.

*Examine the role of light on flowering and physiology of plants under stress conditions.

Paper –V Cell Biology, Genetics and Plant Breeding

- Students going knowledge regarding the unit of life that is cell, types, functions of the various organelles of the cell.
- The student know the DNA Structure which is very useful at molecular levels of genes in various aspects of life quality of genetical characters and forensic methods of the society etc.
- Selection of the best genetic cell characters by advanced molecular techniques in genetics and in crop improvement.
- Plant breeding techniques with help of biotechnology at molecular level breeding with variety of special environmental Habbarder

Paper –Vl Plant Ecology and Phytogeography

- Every students should have the knowledge of elements of environment.
- Climatic factors like light, temperature, in related to growth of plant.
- Students going to knowledge regarding the soil composition the best media for the growth of the plant and other organelles and their interaction in nature.
- Maintenance of flora and fauna population to the community level.
- The course gives wide knowledge of the distribution of the plant and identifying the endemic species maintenance of the biodiversity.
- The student learns acquired knowledge regarding seed bank, conservation the genetic resources and its importance in balancing of the life forms.

*Paper Vll Plant tissue culture and it's biotechnological applications

*Students prepare to learn m.s medium

*Demonistration of in vitro sterilisation methods and inoculation methods using leaf and nodal explant

*The student study of of embryo culture and micro propagation of somatic embryogenesis.

*Study of gene transfer through photographs agrobacterium. mediat gene ltransfer by electroporation, micro injection and micro projectile combadent.

*Student learn invited initiation of calls on artificial medium.

*Students utilize the rDNA technology.

*Understands the applications for biotechnology.

*Study of growth patterns, vegetative charactaristics of Bt cotton and identifying the futures of its pest resistance.

Objectives and General out comes of programme and Domain subject:-

Programme(Bsc)objectives: the objectives of bachelor's degree program with Botany are: 1.

1. To provide a comprehensive knowledge on various aspects related to microbes and plants.

2. To deliver knowledge on latest development in the field of plant sciences with a practical approach.

3.To produce a student who things independently critically ,and discuss various aspects of plant life.

4.To enable the graduate to prepare and pass through national and international examinations related to botany.

5.To empower the student to become an employee or an entrepreneur in the filed of Botany/Biology and to serve the nation.

Program Specific Outcomes :

PSO 1: Understand the basic concepts of Botany in relation to its allied core courses.

PSO 2 :perceive the significance of microbes and plants for human welfare,and structural and functional aspects of plants.

PSO 3 : Demonstrate simple experiments related to Plant sciences, analyze,data,and interpret them with theoretical knowledge.

PSO 4 :work in teams with enhanced inter-personal skills.

PSO 5 :Develop the critical thinking with scientific temper.

PSO 6: Effectively communicate scientific ideas both orally and in writing.

PSO 7 : Understand experiments in botany.

PSO 8 : To understand Knowledge of Taxonomy and Ethno botany

PSO 9 : To Understand the Knowledge of Medicinal Plants.

Domain subject(Botany)objectives:

1. To impart knowledge on origin, evolution,structure,reproduction,and interrelationships of microbes and early plant groups.
2. To provide knowledge on biology and taxonomy of true land plants with in a phylogenetic framework.
3. To teach aspects related to Anotomy, embryology and ecology of plants,and importance of biodiversity.
4. To explain the structural and functional aspects of plants with respect to the cell organelles, chromosomes and genes,and methods of plant breeding.
5. To Develop a critical understanding on SPAC,metabolism and growth and development in plants.
6. To enable the student proficient in experimental techniques and methods of analysis appropriate for various sub-courses in Botany.

Domain subject (Botany)outcomes:

1. students will be able to identify,compare and distinguish various groups of microbes and primitive plants based on their characteristics.
2. students will be able to explain the evolution of tracheophytes and also distribution of plants on globe.
3. student will able to discuss on internal structure,embryology and ecological adoptions of plants,and want of conserving biodiversity.
4. students will be able to interpret life process in plants in relation to physiology and metabolism.
5. students will be able to discribe ultrastructure of plant cells inheritance and crop improvement methods.
6. student will independently design and conduct simple experiments based on the knowledge acquired in theory and practicals of the different sub-courses in Botany.

DEPARTMENT OF CBM
SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Course outcomes

Program Specific Outcomes

B.Sc., (CBM)(Chemistry, Biotechnology and Microbiology)

The program Biotechnology, Microbiology and chemistry has been introduced to prepare the students for a career which finds application and provides solution to some of the major contemporary problems on the globe i.e., providing food for growing population, designing advanced medical treatment options for increasing evolving diseases, to find solution to deteriorating environment caused due to over exploitation / misuse of natural resources etc.,

In this program the study of Microbiology offers around the world there are microbiologists making a difference to our lives – ensuring our food is safe, treating and preventing disease, developing green technologies or tracking the role of microbes in climate change.

In this program the knowledge about the subject chemistry comes in to play when structures of macromolecules and their interactive relations to the environment are to be understood.

Finally the subject biotechnology amalgamates the various disciplines of sciences and offers ethically acceptable knowledge to bring about sustainable solutions for a variety of problems related to Ecology, Evolution, Agriculture, Environment and Quality of human life. These problems are solved with responsibility using appropriate tools while keeping in mind safety factor of Environment and society.

Courses offered and course codes from 2012-20

S.No	Program name	Semester	Course code	Course name
1.	CBM	I	BTT- 101	**MICROBIOLOGY AND CELL BIOLOGY**
2.	CBM	I	BTP-102	**MICROBIOLOGY AND CELL BIOLOGY**
3.	CBM	II	BTT- 201	**MACROMOLEULES, ENZYMOLOGY AND BIOENERGETICS**
4.	CBM	II	BTP- 202	**MACROMOLECULES & ENZYMOLOGY**
5.	CBM	III	BTT- 301	**BIOPHYSICAL TECHNIQUES**
6.	CBM	III	BTP : 302	**METABOLISM & BIOPHYSICAL TECHNIQUES**
7.	CBM	IV	BTT-401	**IMMUNOLOGY**
8.	CBM	IV	BTP- 402	**IMMUNOLOGY & BIOPHYSICAL TECHNIQUES**
9.	CBM	V	BTT-501	**GENETICS AND MOLECULAR BIOLOGY**

10.	CBM	V	BTP-501	**GENETICS AND MOLECULAR BIOLOGY**
11.	CBM	V	BTT-502	**GENE EXPRESSION AND r-DNA TECHNOLOGY**
12.	CBM	V	BTP-502	**GENE EXPRESSION AND r-DNA TECHNOLOGY**
13.	CBM	VI	VII B	**ECOLOGY**
14.	CBM	VI	VII B	**ECOLOGY**
15.	CBM	VI	VIII B1	**DIVERSITY IN LIFE**
16.	CBM	VI	VIII B1	**DIVERSITY IN LIFE**
17.	CBM	VI	VIII B2	**EVOLUTION**
18.	CBM	VI	VIII B2	**EVOLUTION**
19.	CBM	VI	VIII B3	**PROJECT**
20.	CBM	VI	VIII B3	**VIVA-VOCE**

PROGRAMME SPECIFIC OUTCOME

PSO 1: Understand The program Biotechnology, Microbiology and chemistry has been introduced to prepare the students for a career which finds application and provides solution to some of the major contemporary problems on the globe i.e., providing food for growing population, designing advanced medical treatment options for increasing evolving diseases, to find solution to deteriorating environment caused due to over exploitation / misuse of natural resources etc.,

PSO 2: In this program the study of Microbiology offers around the world there are microbiologists making a difference to our lives – ensuring our food is safe, treating and preventing disease, developing green technologies or tracking the role of microbes in climate change.

PSO 4: In this program the knowledge about the subject chemistry comes in to play when structures of macromolecules and their interactive relations to the environment are to be understood.

Finally the subject biotechnology amalgamates the various disciplines of sciences and offers ethically acceptable knowledge to bring about sustainable solutions for a variety of problems related to Ecology, Evolution, Agriculture, Environment and Quality of human life. These problems are solved with responsibility using appropriate tools while keeping in mind safety factor of Environment and society.

COURSE OUTCOME

S.NO	COURSE OUTCOME
	CELL BIOLOGY AND MICROBIOLOGY
1.	To learn about contributions of various scientists in the field of Biotechnology and microscopy, various staining methods useful for the study of microorganisms in detail. To be motivated to pursue research through keen observations.
2.	To study in detail about Microorganisms like bacteria and viruses - their structure, life cycle, history, classification and their importance a. To apply the knowledge about microorganisms in daily life like maintaining hygiene, and taking food rich in probiotics for healthy life.
3.	To study the food habits of diverse microorganisms under the name microbial nutrition. To acquire the ability to decide which nutrition should be supplied to a particular microorganism for its growth and to apply this knowledge for carrying out project.
4.	To know about the favourable and unfavourable conditions, growth properties, mechanisms to control growth of microbes. To use this knowledge in controlling harmful microorganisms and thus avoiding occurrence of infectious diseases.
5.	To study the detailed structure and the sub cellular structures, various mechanisms occurring in the eukaryotic cell, which helps in designing drugs in case there is abnormal cell division etc.
	MACROMOLEULES, ENZYMOLOGY AND BIOENERGETICS
6.	To know about the discovery, structure and properties, stabilizing forces of various kinds of DNA. The understanding of the basic molecule of life like DNA for inspiring research in various fields and specifically in life science for gene therapy, designing drugs etc.
7.	To know about the structures, classification physic-chemical properties of the building blocks of proteins i.e., amino acids. To learn about the mechanism of diseases resulting due to abnormal protein structures.
8.	To learn about the classification, structure, nomenclature and importance of a major nutrient that is carbohydrate. To learn about the polysaccharides present in nature and various conditions arising due to lack of improper intake of carbohydrates.
9.	To learn about the structure, classification, nomenclature, inhibition, kinetics of the enzymes the knowledge of which is useful for application in medical field to cure diseases arising due to non-functional or absence of enzymes.
10.	To study regulation, inhibition, Bypass reactions of various pathways taking place in living cells in detail as any abnormalities or diseases arising due to dysregulation of the pathways is easily understood and solution can be provided through research.
11.	To acquire knowledge on the principle, basic concepts, instrumentation, applications, types of spectrophotometry are studied and this knowledge is applied for estimation of biomolecules like DNA, Proteins, Coloured solutions etc.
	BIOPHYSICAL TECHNIQUES
12.	To learn about the principle, mechanism, equipment and applications of separation of biomolecules, pigments etc., is learnt. This knowledge is useful in isolating certain molecules in pure form.
13.	To be able to Design and carry out appropriate PCR based DNA detection assays and to apply gel electrophoresis in DNA detection and quantification, Evaluate appropriate methods for mutation detection, Use Bioinformatics tools for DNA sequence analysis.
14.	To learn about Isotopic tracer techniques - how to calculate the Measurement of radioactivity, different principle, advantages, disadvantages instrumentation techniques of counters, mass spectroscopy and they can learn how to apply different isotopes in biotechnology.
15.	To learn the basic principles, concept and types of centrifuges to isolate cell components and determine molecular weight by sedimentation velocity and sedimentation equilibrium methods.

	To learn the basic concepts of mean, median, mode and standard deviation and standard error, Anova using to calculate problems,
	IMMUNOLOGY
16.	To learn about the basic mechanisms, distinctions and functional interplay of innate and adaptive immunity and the cellular/molecular pathways of humoral/cell-mediated adaptive responses.
17.	To learn about the structure, classes, types of Antibody and Antigens and factors affecting antigenicity.
18.	To understand how disease causing microorganism can be used as a weapon to fight against the same microorganism.
19.	To get better understanding about vaccination, blood transfusion, grafting etc.
20.	To gain knowledge that helps to take up research to find medicines for present incurable diseases.
	GENETICS AND MOLECULAR BIOLOGY
21.	To study about macromolecules responsible for life on earth.
22.	To acquire knowledge on Organelle genome organization and various gene families
23.	To know the level of expression by transcription and translation.
24.	To learn the molecular mechanisms responsible for diseases and may take up research in this field.

DEPARTMENT OF COMMERCE
SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Course outcomes

- After the completion of B.Com course the students will be able to acquire conceptual knowledge and application skills in the domain of Commerce studies.
- It enables the students to make start ups independently.
- Knowledge of different subjects in B.Com course such as Accounting, Costing and Banking etc. Helps the students to stand in different organisations.
- It provides well trained professionals to industries, Banking Sector, Insurance Companies and Finance Companies.
- The students will be able to become competent in the competitive world and they can be assured of job placements and good careers at the end of the course.

PROGRAMME SPECIFIC OUTCOMES

- After completion of B.Com course the students will be able to do post graduation and undertake research activity in the field of finance and Commerce.
- The course provides a good foundation to students who wish to pursue professional courses like CA, ICWA and CS etc.
- Students will gain thorough and systematic knowledge in various subjects like Accounting, Banking, Finance, Taxation and Marketing etc.
- The students will be able to acquire entrepreneurship skills and managerial skills.
- The course develops communication skills, decision making skills and innovative thoughts in students.
- By studying this course the students will get good jobs and occupy good positions like Bank Managers, Auditors, Company Secretaries, Professors and so on.

Sl.No.	TITLE OF PAPER	COURSE OUTCOMES
SEMESTER I		
B Com(General)		
1	ACCOUNTING – I	At the end of Accounting – I course the students will be able to • Equip with the fundamental knowledge relating to the Accounting principles and procedures. • Learn the methods of recording business transactions and preparing various accounts. • Know about the maintenance of subsidiary books preparation of Bank Reconciliation statement and Trial Balance. • Prepare final accounts of the sole trading organisation.
2	BUSINESS ORGANISATION AND MANAGEMENT	On completion of Business organisation & Management course the students will be able to • Learn about profit earning creation of customers and regular innovations. • Develop a set of personal business career options and apply business ethics and social responsibility. • Understand the basic concepts and functions of Business Organisation as well as Management.
3	BUSINESS ECONOMICS – I	At the end of Business Economics course the student will be able to • Describe the nature of economics in dealing with the issues of scarcity of resources. • Analyse demand and supply analysis and its impact on Consumer behaviour. • Evaluate the factors such as production and costs affecting firms behaviour. • Apply economics models for managerial problems.
B Com(Computers)		
4	ACCOUNTING – I	At the end of Accounting – I course the students will be able to • Equip with the fundamental knowledge relating to the Accounting principles and procedures. • Learn the methods of recording business transactions and preparing various accounts. • Know about the maintenance of subsidiary books preparation of Bank Reconciliation statement and Trial Balance. • Prepare final accounts of the sole trading organisation.

5	BUSINESS ORGANISATION AND MANAGEMENT	On completion of Business organisation & Management course the students will be able to • Learn about profit earning creation of customers and regular innovations. • Develop a set of personal business career options and apply business ethics and social responsibility. • Understand the basic concepts and functions of Business Organisation as well as Management.
6	COMPUTER FUNDAMENTALS AND PHOTOSHOP	Upon completion of the course, the students will be able to • Bridge the fundamental concepts of computers with the present level of knowledge of the students. • Explore the basic knowledge of Photoshop. • Create and Edit their own images successfully.
SEMESTER II		
B Com(General)		
7	ACCOUNTING – II	On Completion of Accounting – II course, the students will be able to • Acquire the knowledge relating to the accounting treatment of consignment and joint venture businesses. • Learn different methods of providing for Depreciation. • Know about various types of Reserves, Provisions and Accounting procedure followed by the non-profit organisations.
8	BUSINESS ENVIRONMENT	On completion of Business Environment Course the Students will be able to • Understand the different environments in the business climate. • Know the major and minor factors affecting the business in various streams. • Acquire in depth knowledge about legal environment. • Know the effects of government policy on the economic environment.
9	BUSINESS ECONOMICS - II	At the end of Business Economics course the student will be able to • Understand the concept of cost, nature of production and its relationship to Business operations. • Learn the pricing and output decisions under

		various market structure. • Apply marginal analysis to the firm under different market conditions. • Understand different methods for the measurement of National Income.
B Com(Computers)		
10	ACCOUNTING – II	On Completion of Accounting – II course, the students will be able to • Acquire the knowledge relating to the accounting treatment of consignment and joint venture businesses. • Learn different methods of providing for Depreciation. • Know about various types of Reserves, Provisions and Accounting procedure followed by the non-profit organisations.
11	BUSINESS ECONOMICS	At the end of Business Economics course the student will be able to • Describe the nature of economics in dealing with the issues of scarcity of resources. • Analyse demand and supply analysis and its impact on Consumer behaviour. • Understand the concept of cost, nature of production and its relationship to Business operations. • Understand different methods for the measurement of National Income
12	ENTERPRISE RESOURCE PLANNING	At the end of the course the student should be able to • Identify the important business functions provided by typical business software such as Enterprise Resource Planning. • Knowledge of basic concepts of ERP Systems. • Develop skills necessary for building and managing relationships with customers and stakeholders
SEMESTER III		
B Com(General)		
13	CORPORATE ACCOUNTING	At the end of Corporate Accounting course, the students will be able to • Equip with the knowledge relating to the accounting procedures followed by the companies. • Know about the valuation of shares and good will. • Understand various provisions of the

		companies Act 2013. • Prepare final accounts of the companies using computers.
14	BUSINESS STATISTICS	At the end of Business Statistics course the students will be able to • Describe and discuss the key terminology, concepts, tools and techniques used in business statistical analysis. • Use statistical, graphical and algebraic techniques wherever relevant. • Deal with numerical and quantitative issues in business. • Understand statistical applications in Economics and managements.
15	BANKING THEORY AND PRACTICE	At the end of Banking Theory and Practice course, the students will be able to • Understand the basic concepts of Banks and functions of Commercial Banks • Demonstrate an awareness of law and practice in Banking Context. • Critically examine the current scenario of Indian Banking System. • Formulate the procedure for better service to the customers from various Banking innovations. • Formulate the procedure for better service to the customers from various Banking innovations.
B Com (Computers)		
16	CORPORATE ACCOUNTING	At the end of Corporate Accounting course, the students will be able to • Equip with the knowledge relating to the accounting procedures followed by the companies. • Know about the valuation of shares and good will. • Understand various provisions of the companies Act 2013. • Prepare final accounts of the companies using computers.
17	BUSINESS STATISTICS	At the end of Business Statistics course the students will be able to • Describe and discuss the key terminology, concepts, tools and techniques used in business statistical analysis. • Use statistical, graphical and algebraic techniques wherever relevant. • Deal with numerical and quantitative issues

		in business. • Understand statistical applications in Economics and managements.
18	OFFICE AUTOMATION TOOLS	By learning the course the student will be able to • Apply application software in an Office. • Perform accounting operations. • Database Management
SEMESTER IV		
B Com(General)		
19	ACCOUNTING FOR SERVICE ORGANISATIONS	On completion of the Accounting for Service Organisations Course, the students will be able to • Acquire the knowledge relating to the accounting procedures followed by various non-trading/service organisations. • Know about electricity supply companies, Bank accounts and Insurance companies.
20	BUSINESS LAW	The study of Business Laws course will enable the students to • Equip with the knowledge of legal environment and legal principles. • Identify the fundamental legal principles behind contractual agreements. • Understand the legal and fiscal structure of different forms of business organisations. • Acquire problem solving techniques and present coherent legal argument.
21	INCOME TAX	On completion of Income Tax course the students will be able to • Acquire the knowledge regarding Income Tax. • Understand the concepts of exempted incomes and provisions of agricultural income. • Compute the income under the head “Income from salary”, “Income from house property” and “Capital Gains”. • Learn the concept of Deductions U/S 80.
B Com(Computers)		
22	PROGRAMMING IN C	Upon successful completion of the course, a student will be able to • Analyze a given problem and develop an algorithm to solve the problem along with flowchart. • Use the „C‟ language constructs in the right way. • Design, develop and test programs written in „C‟.

23	BUSINESS LAW	The study of Business Laws course will enable the students to • Equip with the knowledge of legal environment and legal principles. • Identify the fundamental legal principles behind contractual agreements. • Understand the legal and fiscal structure of different forms of business organisations. • Acquire problem solving techniques and present coherent legal argument.
24	BUSINESS ANALYTICS	After completion of Business analytics course the students will be able to • Identify and describe complex business problems in terms of analytical models. • Apply appropriate analytical methods to find solutions to business problems. • Communicate technical information to both technical and non-technical audience.
SEMESTER V		
B Com(General)		
25	BUSINESS LEADERSHIP	On completion of Business Leadership course the students will be able to • Develop critical thinking and leadership skills • Gain knowledge of diverse culture, cross cultural commercialisation and use of power between groups. • Understand the process for decision making. • Integrate their experiences into their leadership development process.
26	COST ACCOUNTING	At the end of Cost Accounting course the students will be able to • Acquire conceptual knowledge relating to accounting of various costs. • Get good training in finding the cost of products using different methods of costing. • Know the method of recording income and expenditure relating to production of goods and services. • Learn about cost ascertainment, cost control and cost reduction.
27	GOODS AND SERVICE TAX	After completion of Goods & Services Tax course the students will be able to • Learn the concepts Indirect tax and GST from the pre-GST period to post GST period. • Understand the importance of GST in Indian

		and global economy and its contribution to the economic development. • Know about the principles of Taxation, objects & impacts of taxes, shifting and incidence processes of indirect taxes in the market oriented economy. • Become tax consultants.
28	COMMERCIAL GEOGRAPHY	At the end of Commercial Geography Course the students will be able to • Acquire the knowledge relating to natural resources like water, minerals, mines and agricultural products. • Understand the effects of pollutions • Analyse the uses of forests and effects of deforestation. • Know about the evolution and internal structure of the earth
29	CENTRAL BANKING	The study of Central Banking course will enable the students to • Acquire the comprehensive knowledge relating to the functions and operations of Central Banks. • Know about the role of Reserve Bank of India in developing Indian economy. • Analyse the impact of Central Banks monetary policy on financial system and the over all economy.
30	RURAL AND FARM CREDIT	After completion of Rural and Farm credit course the students will be able to • Equip with the basic knowledge relating to farming in rural areas. • Know about the farm credit. • Learn about various credit facilities provided by the government.
B Com(Computers)		
31	COST ACCOUNTING	At the end of Cost Accounting course the students will be able to • Acquire conceptual knowledge relating to accounting of various costs. • Get good training in finding the cost of products using different methods of costing. • Know the method of recording income and expenditure relating to production of goods and services. • Learn about cost ascertainment, cost control and cost reduction.

32	TAXATION	At the end of Taxation course the students will be able to • Know the procedure of Direct Tax assessment. • Understand the importance of Indirect tax in the Indian global economy and its contribution to the economic development. • Know about IT authorities, their powers, appeal, revision, tax penalities, offences and prosecution. • Compute total income and can file IT return on individual basic.
33	COMMERCIAL GEOGRAPHY	At the end of Commercial Geography Course the students will be able to • Acquire the knowledge relating to natural resources like water, minerals, mines and agricultural products. • Understand the effects of pollutions • Analyse the uses of forests and effects of deforestation. • Know about the evolution and internal structure of the earth
34	BANKING THEORY AND PRACTICE	At the end of Banking Theory and Practice course, the students will be able to • Understand the basic concepts of Banks and functions of Commercial Banks • Demonstrate an awareness of law and practice in Banking Context. • Critically examine the current scenario of Indian Banking System. • Formulate the procedure for better service to the customers from various Banking innovations. • Formulate the procedure for better service to the customers from various Banking innovations.
35	DBMS	At the end of the course the student will be able to • Understand the basic concepts of database and database management. • Understand the database development process. • Use of SQL.
36	WEB TECHNOLOGIES	After completion of the course the student will be able to • Analyse a web page and identify its elements and attributes. • Create web pages using HTML and

		Cascading Style Sheets. • Build dynamic web pages using JavaScript.
SEMESTER VI		
B Com(General)		
37	TALLY	After completion of Tally course, the students will be able to • Acquire knowledge relating to computerised Accounting. • Develop computer skills of recording financial transactions, preparation of annual accounts and reports using computers. • Apply the knowledge of quantitative tools and techniques in the interpretation of Data for managerial decision making.
38	MARKETING	On completion of Marketing Course the students will be able to • Develop an idea about marketing and marketing environment. • Understand the consumer behaviour and market segmentation process. • Comprehend the product life cycle and product line decisions. • Formulate new marketing strategies.
39	AUDITING	After completion of Auditing course, the students will be able to • Equip with the conceptual knowledge relating to audit procedures and practices. • Know about different types of audits and rights and duties of Auditors. • Learn how to examine the books of accounts and express an opinion on financial statements. • Demonstrate the accounting knowledge and skills in auditing.
40	MANAGEMENT ACCOUNTING	At the end of Management Accounting course the students will be able to • Understand the importance of management accounting system and Role of Management Accountant. • Know about uses and limitations of Financial Statements. • Know about classification and advantages of Ratio analysis. • Learn about preparation of Funds Flow statement and Cash flow statement.
41	FINANCIAL SERVICES	At the end of the Financial Services Course the

		students will be able to • Acquire the knowledge about various financial services provided by the Government. • Know the development in India with the help of Financial Services. • Understand the Indian Financial System.
42	MARKETING OF FINANCIAL SERVICES	On completion of marketing of financial services course the students will be able to • Equip with the knowledge relating to the service elements and service management. • Understand the service process and strategies in service organisations. • Know about Insurance Services in India. • Analyse the Investment methods in India.
B Com(Computers)		
43	EVENT MANAGEMENT	At the end of Event Management Course, the students will be able to • Understand and analyse the role of management of different events. • Apply the theory and skills necessary to professionally plan and organise business events. • Analyse the importance of strategic planning for events or festivals.
44	MARKETING	On completion of Marketing Course the students will be able to • Develop an idea about marketing and marketing environment. • Understand the consumer behaviour and market segmentation process. • Comprehend the product life cycle and product line decisions. • Formulate new marketing strategies.
45	AUDITING	After completion of Auditing course, the students will be able to • Equip with the conceptual knowledge relating to audit procedures and practices. • Know about different types of audits and rights and duties of Auditors. • Learn how to examine the books of accounts and express an opinion on financial statements. • Demonstrate the accounting knowledge and skills in auditing.
46	MANAGEMENT	At the end of Management Accounting course the

	ACCOUNTING	students will be able to • Understand the importance of management accounting system and Role of Management Accountant. • Know about uses and limitations of Financial Statements. • Know about classification and advantages of Ratio analysis. • Learn about preparation of Funds Flow statement and Cash flow statement.
47	TALLY WITH GST APPLICATIONS	On completion of Tally with GST Applications course, the students will be able to • Learn the concepts Indirect tax and GST from the pre-GST period to post –GST period. • Understand the importance of Indirect tax(GST) in Indian and Global economy and its contribution to the economic development. • Understand the major concepts in Tally. • Acquire the complete knowledge of GST-returns like monthly filling returns, composition quarterly filling returns and GSTR forms. • Acquire the practical knowledge of payment of GST taxes online.
48	E-COMMERCE	At the end of E-Commerce course, the student will be able to • Understand the importance of E-Commerce. • Infrastructure of E-Commerce. • Legal Issues and privacy in E-Commerce. • Asses Electronic payment systems.

SRI Y. N. COLLEGE (AUTONOMOUS)-NARSAPUR
(Affiliated to Adikavi Nannaya University) Thrice Accredited by NAAC at „A" Grade
Recognized by UGC as „College with Potential for Excellence"

DEPARTMENT OF PHYSICS For the Academic year 2018-19

PROGRAMME OUTCOMES

Programme	Combination	Programme Outcomes	Programme Specific outcomes
B.Sc.	B.Sc. – MPE (EM)	Possess a sound understanding of the theoretical foundation of various core subjects. Acquire analytical and logical thinking skills necessary to pursue higher Education. Gain employment at entry level positions based on program curriculum After the completion of UG program the student gets eligibility to join PG programme, MBA, Student will be eligible to write bank PO/Clerk examinations, Civil services and other group services examinations.	**Mathematics:** Develop proficiency in high level mathematical methods, Acquire analytical and logical thinking skills **Physics:** Master a broad set of knowledge concerning the fundamentals in the basic areas of Physics **Electronics**: Master a broad set of knowledge concerning the fundamentals in the basic areas of Electronics. Hands-on experience in various practical aspects of problem solving/ programming/ experimental techniques, and data analysis and presentation competence.
B.Sc.	B.Sc. – MPC (TM & EM)	Posses a sound understanding of the theoretical foundation of various core subjects. Acquire analytical and logical thinking skills necessary to pursue higher Education. Gain employment at entry level positions based on program curriculum After the completion of UG program the student gets eligibility to join in PG programme, MBA, Student will be eligible to write bank PO/Clerk examinations, Civil services and other group services examinations.	**Mathematics:** Develop proficiency in high level mathematical methods, Acquire analytical and logical thinking skills **Physics:** Master a broad set of knowledge concerning the fundamental in the basic areas of Physics **Chemistry:** understand the fundamental theories, the concepts and applications of chemistry. Gains knowledge of important laboratory techniques, methods, and instrumentation.

B.Sc.	B.Sc (MPCs) Mathematics, Physics, Computer science	Expertise in the basic sciences provides the students with opportunities to go for Higher Education 2. Promotes an in-depth exploration in specific field, current ways of thinking, new discoveries, and methodologies of the discipline. Gain employment at entry level positions based on program curriculum	**Mathematics:** Develop proficiency in high level mathematical methods, Acquire analytical and logical thinking skills **Physics:** Master a broad set of knowledge concerning the fundamentals in the basic areas of Physics. **Computer Science**: Hands-on experience in various practical aspects of problem solving/ programming/ experimental techniques, and data analysis and presentation competence. Effectively use the software - MS Excel and R-Programming.

DEPARTMENT OF PHYSICS
COURSE OUTCOMES
MECHANICS & PROPERTIES OF MATTER

Course Outcomes

CO1: Describe the physical significance of gradient of scalar field, divergence and curl of vector field. Applications of Gauss's & Green's theorems. (K2)

CO2: Describe the working of multi stage rockets, collisions in 2D & 3D. concept of Rutherford's scattering experiment and its importance. (K2)

CO3: Apply Euler equations and Analyse of processional velocity of symmetric top. (K3)(K4)

CO4: Demonstrate central force with examples. Verification of Kepler's laws, application to Planetary system. (K3)

CO5: Deduce the concepts of relativity, frame of reference, Lorentz transformations, length contraction and time dilation. (K4)

WAVES & OSCILLATIONS

Course Outcomes

CO1: Analysing the simple Harmonic Motion, characteristics. Determination of acceleration due to gravity 'g' by Compound pendulum & rigidity modulus by Torsion pendulum. (K5)

CO2: Apply the concept of damping to determine logarithmic decrement & quality factor. Differential equation of forced harmonic oscillator and its equation and applied in daily life. (K4)

CO3: Analyse the periodic functions like square wave, Saw tooth wave by using Fourier's theorem.(K5)

CO4: Basic understanding of Ultrasonics, different production methods and applications. (K3)

PRACTICAL

Course Outcomes:

CO1: Determine the acceleration due to gravity(g) and radius of gyration(k) by compund pendulum. (K3)

CO2: Determine the moment of Inertia(I) of a regular rectangular body by bifilar pendulum. (K3)

CO3: Determine the Rigidity modulus (n) of the material of wire by Torsional pendulum.(K3)

CO4: Justify the laws of vibration of stretched string - Sonometer. (K5)

CO5: Estimate standard errors - simple pendulum. (K4)

CO6: Measure the Yong's modulus of the material of a bar - Non-Uniform bending. (K5)

THERMODYNAMICS & WAVE OPTICS

Course Outcomes

CO1: Describe the basic concepts of Thermodynamics and the kinetic theory of gases, transport phenomenon.(K2)

CO2: Deduce the thermodynamic potentials and deriving the Maxwell's equations, and their application to different thermodynamic systems. (K4)

CO3: Explain interference and its applications. (K3)

CO4: Demonstrate the concept of aberrations, their importance in camera and other lens systems. (K3) practice

THERMODYNAMICS & RADIATION PHYSICS

Course Outcomes

CO1: Explain the concept of low temperature Physics and its applications. (K3)

CO2: Determine different laws and formulae in Quantum theory of radiation and measurement of radiation by using different Pyrometers. (K3)

CO3: Explain diffraction and basic understanding of Holography. (K3)
CO4: Demonstrate the polarization and different methods of conversion of unpolarized light into polarized light. Basics of Fiber optics. (K3)

PRACTICAL FOR THERMODYNAMICS & RADIATION PHYSICS

Course Outcomes:
CO1: Determine heating efficiency of electric kettle by varying voltages. (K3)
CO2: Estimate the Temperature, characteristics of Thermister. (K4)
CO3: Determine Plank's Constant. (K3)
CO4: Determine Stefan's constant. (K3)
CO5: Measure Thermal conductivity of a bad conductor by Lee's Methods. (K5)

ELECTRICITY, MAGNETISM & ELECTRONICS

Course Outcomes
CO1: Deduce Gauss's law and its applications of electrostatics & basics of dielectrics.
CO2: Analyse the electric & magnetic fields and understand the Biot savart's law and apply it to long straight wire & solenoid. (K4)
CO3: Define the basic laws of electricity and magnetism, deduce Maxwell equations and analyse the production of electromagnetic waves. (K1)(K4)
CO4: Describe basic concepts of electronics, working of p-n junction diodes and analysis of transistor configurations. (K2)

ELECTRICITY, MAGNETISM & ELECTRONICS PRACTICAL

Course Outcomes:
CO1: Determine the figure of merit of Moving Coil Galvonameter. (K3)
CO2: Measure Q-factor using L-C-R Series resonance.(K5)
CO3: Frequency of AC Sonometer.
CO4: Magnetic field along the axis of a circular coil carrying current.
CO5: Measure the specific resistance of the material of a given wire using Garey Foster's Bridge. (K5).
CO6: Justify Kirchoff's Laws. (K4)

MODERN PHYSICS

Course Outcomes
CO1: Describe evolution of atomic models spectra of different elements, the effect of electric and magnetic field on the spectra. (K2)
CO2: Describe properties of the nucleus and the models associated with it. (K2)
CO3: Explain the theories behind the alpha and beta decays. Different detectors used to detect alpha, beta & gamma radiations. (K3)
CO4: Describe the crystal structure and also experimental study of it. (K2)
CO5: Explain the basic theories of superconductivity. (K3)

MODERN PHYSICS LAB

Course Outcomes:
CO1: Determination of specific charge e/m of an electron – Thomson method.
CO2: Determination of Plank's Constant by using Photo voltaic cell.
CO3: Determination of M and H by using deflection magneto meter and vibration magnetometer
CO4: Energy gap of semiconductor by using junction diode.
CO5: Verification of De'Morgans theorem.
CO6: Determination of Mutual Inductance by using ballistic Galvonameter.

RENEWABLE ENERGY

Course Outcomes

CO1: Demonstrate different forms of energy resources and its role in economic development. (K3)

CO2: Describe the effects of environmental degradation, global warming, nuclear power generation.(K2)

CO3: Correlate Solar, Wind, Ocean, Hydrogen energy conversions. (K4)

CO4: Analyse the conversion of bio mass into fuels, biomass plants types and design. (K4)

RENEWABLE ENERGY PRACTICAL

Course Outcomes:

CO1: Measure V-I characteristics of Solar cell. (K5)

CO2: Illustrate the effect of input light intensity of the performance of solar cell. (K4)

CO3: Determine the constant of Ballistic Galvonameter by standard condenser method. (K3)

CO4: Measure resonance frequency of Phase Shift Oscillator. (K5)

CO5: Illustrate characteristics of Wind. (K4)

CO6: Evaluate the performance of Solar cooker. (K5)

SOLAR THERMAL AND PHOTOVOLTAIC ASPECTS

Course Outcomes

CO1: Explain basics of solar radiations and solar intensity measurements. (K2)

CO2: Classify design and performance parameters of concentrating collectors.(K4)(K6)

CO3: Analyze the fabrication of different types of solar cells. (K5)

SOLAR THERMAL & PHOTOVOLTAIC ASPECTS – PRACTICAL

Course Outcomes:

CO1: Measure Solar constant using Angstron Pyrheliometer. (K5)

CO2: Measure Tilt angle using Solar Photo voltaic panel. (K5)

CO3: Determine Voltage & Current Solar Photo Voltaic panel in series. (K3)

CO4: Determine Voltage & current Solar Photo Voltaic panel in Parallel. (K3)

WIND, HYDRO & OCEAN ENERGIES

Course Outcomes

CO1: Describe wind generation, meteorology of wind and classify wind energy convertors. (K2)(K4)

CO2: Demonstrate construction and working of wind turbine and its characteristics. (K3)

CO3: Classify the technology process of Ocean, thermal and tidal energy conversion. (K4)

WIND HYDRO & OCEAN ENERGIES

Course Outcomes:

CO1: Estimate wind speed using anemometer. (K4)

CO2: Determine the characteristics of wind generator turbine. (K3)

CO3: Evaluate performance of vertical and horizontal axis wind turbine. (K5)

CO4: Estimate electric power output using Wind turbine. (K4)

ENERGY STORAGE DEVICES

Course Outcomes

CO1: Analyse different modes of energy storage. (K4)

CO2: Analyse different types of electro chemical energy storage systems. (K4)

CO3: Demonstrate fuel cell components, principle and it's working. (K3)

CO4: Classify different types of fuel cells and the problems with fuel cells and their applications. (K4)

ENERGY STORAGE DEVICES – PRACTICAL

Course Outcomes:

CO1: Analyse charge and discharge characteristics of a storage battery. (K4)
CO2: Analyse charge and discharge characteristics of a storage capacitor. (K4)
CO3: Analyse charge and discharge characteristics of NI-Cd battery using solar photo voltaic cell. (K4)
CO4: Evaluate the performance of Solar cooker. (K5)

WAVE OPTICS I

Course Outcomes:
CO1: Determine the radius of curvature of a given convex lens - Newton's Rings. (K3)
CO2: Estimate power of a prism. (K4)
CO3: Determine wave length of light using diffraction grating - Minimum deviation method. (K3)
CO4: Estimate the resolving power of a telescope. (K4)
CO5: Determine the refractive Index of liquid - Boye's method. (K3)
CO6: Determine the refractive Index of the material of a convex lens. (K3)

WAVE OPTICS II

Course Outcomes:
CO1: Determine refractive Index of liquid - Boye's method. (K3)
CO2: Determine the Resolving power of a telescope. (K3)
CO3: Determine the wave length of light using diffraction grating - Minimum deviation method. (K3)
CO4: Determine radius of curvature of a given convex lens - Newton's Rings. (K3)
CO5: Determine the spherical and Chromatic aberrations produced by a think lens. (K4)
CO6: Determine Dispersive power of prism by using spectrometer. (K3)

DEPARTMENT OF MICROBIOLOGY

SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Course outcomes

S.NO	COURSE CODE	SEMESTER	COURSE OUTCOMES
1.	MBT – 101 MBP-101	I SEMESTER	ITheory- INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY IPracticals- INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY
2.	MBT -201 MBP-201	II-SEMESTER	II – Theory- MICROBIAL BIOCHEMISTRY & METABOLISM II Practicals- MICOBIAL BIOCHEMISTRY & METABOLISM
3.	MBT-301 MBP-301	III-SEMESTER	III Theory-MICROBIAL GENETICS & MOLECULAR BIOLOGY III Practicals – MICROBIAL GENETICS & MOLECULAR BIOLOGY
4.	MBT-401 MBP -401	IV-SEMESTER	IV Theory- IMMUNOLOGY & MEDICAL MICROBIOLOGY IVPracticals- IMMUNOLOGY & MEDICAL MICROBIOOGY
5.	MBT-501 MBP-501	V-SEMESTER	V Theory- ENVIRONMENTAL & AGRICULURAL MICROBIOLOGY V Practicals- ENVIRONMENTA & AGRICULTURAL MICROBIOOGY
6.	MBT-601	VI-SEMESTER	VI Theory- FOOD & INDUSTRIAL MICRBIOLOGY VI Practicals- FOOD & INDUSTRIAL MICROBILOGY

7.	MBP-601 *MBT-701* MBP-701	VII-SEMESTER	VII Theory-MICROBIALBIOTECHNOLOGY VII Practicals- MICROBIAL BIOTECHNOOGY

PROGRAM OUTCOMES :(Pos)

Program outcomes, upon graduation should have a thorough knowledge and understanding of the core concepts in the discipline of microbiology.

- Describe how microorganisms are used as model systems to study basic biology, genetics, metabolism and ecology.
- Identify ways microorganisms play an integral role in disease, and microbial & immunological methodologies are used in disease treatment and prevention.
- Explain why microorganisms are ubiquitous in nature.
- For examples vital role of microorganisms in biotechnology, fermentation, medicine, and other industries important to human well being.
- Demonstrate that microorganisms have an indispensable role in the environment, including elemental cycles, biodegradation etc.
- Upon graduation, microbiology majors should have mastered a set of fundamental skills, which would be useful to function effectively as professionals and to their continued development and learning within the field of microbiology.

  These skills include the following are –

  (A) Nature of science & scientific inquiry
  (B) Laboratory skills
  (C) Data analysis skills
  (D) Critical thinking skills

PROGRAM SOURCE OUTCOMES: (PSOs)

S.NO	COURSE CODE	SEMESTER	COURSE OUTCOMES
1.	MBT–101	Introductory microbiology & microbial diversity	➢ To study importance & applications of microbiology. ➢ To study history and contribution of microbiology. ➢ To study classification of microorganisms. ➢ To study outline of bergey's manual of systematic bacteriology. ➢ To study general charcteristcs of bacteria, morphology structure & replication mechanism. ➢ To study general characteristics & classification of fungi, algae & protozoa. ➢ To study principles of microscopy. ➢ To study staining & sterilization techniques. ➢ To study isolation & preservation techniques.
2.	MBT -201	MICROBIAL BIOCHEMISTRY & METABOLISM	➢ To study general characteristics amino acids & proteins. ➢ To study structure of nitrogen bases, nucleotides, & nucleic acids. ➢ To study types of fatty acids & lipids ➢ To study principles & applications calorimetry. ➢ To study paper chromatography & spectrophotometry. ➢ To study centrifugation To study general characteristics & classification of carbohydrates. ➢ & gel electrophoresis. ➢ To study properties & classification of enzymes. ➢ To study factors affecting catalytic activity. ➢ To study types of inhibition enzyme activity. ➢ To study microbial nutrition & its types. ➢ Types of microbial growth & its factors. ➢ Methods for measuring microbial growth. ➢ To study aerobic & anaerobic respiration process. ➢ To study fermentation process.
3.	MBT-301	MICROBIAL GENETICS & MOLECULAR BIOLOGY	➢ To study structure & organisation of genetic material. ➢ To study extra chromosomal elements. ➢ Replication of DNA & involved enzymes. ➢ Outlines of DNA damage & repair mechanisms. ➢ To study mutations & mutagens , its types.

			➢ To study genetic recombination in bacteria. ➢ To study concept of genes. ➢ To study genetic codes. ➢ Structure and types of RNA & its functions. ➢ To study structure of ribosome. ➢ Regulation of gene expression in bacteria. ➢ Basic principles of genetic engineering & its applications.
4.	MBT-401	IMMUNOLOGY & MEDICAL MICROBIOLOGY	➢ To study types of immunity & lymphoid organs. ➢ To study cells of immune system. ➢ To study identification & functions of B & T Lymphocytes. ➢ To study types of antigens & antibodies . ➢ Polyclonal & monoclonal antibodies – production its applications. ➢ To concept study hypersensitivity of autoimmunity. ➢ To study host pathogen interaction and nosocomial infection. ➢ To study general principles of diagnostic microbiology. ➢ To study general methods of laboratory diagnosis. ➢ To study antibacterial, antifungal, antiviral agents. ➢ To study antimicrobial susceptibility. ➢ To study antibiotic resistance in bacteria. ➢ To study natural & recombinant vaccines.
5.	MBT-501	ENVIRONMENTAL & AGRICULURAL MICROBIOLOGY	➢ To study terrestrial, aquatic & atmosphere habitats. ➢ To study role of microorganisms in nutrient cycling. ➢ Treatment of potable water & its methods. ➢ To study microbial interaction. ➢ To study out lines of solid waste & liquid waste management. ➢ To study of plant growth promoting microorganisms. ➢ Out lines of biological nitrogen fixation. ➢ To study concept of disease in plants.
6.	MBT-601	FOOD & INDUSTRIAL MICROBILOGY	➢ To study microbial spoilage of food. ➢ Food intoxification. ➢ Food borne diseases & their detection. ➢ Principles of food preservation. ➢ Fermented dairy & its foods microorganisms.

7.	MBT-701	MICROBIAL BIOTECHNOLOGY	➢ Probiotics and their benefits. ➢ Industrial importance of microorganisms. ➢ Out lines of isolation & screening of microorganisms. ➢ Types of fermentation process. ➢ Basic concept of design of fermenter. ➢ To study down streaming process. ➢ To study microbial production of industrial products. ➢ Scope & its applications in microbial biotechnology. ➢ Genetic engineered microbes for industries – bacteria & yeast. ➢ Recombinant microbial production processes in pharmaceutical industries. ➢ To study of production and its applications of microbial polysaccharides, bio plastics & biosensors . ➢ to study microbial based transformation of steroids and sterols. ➢ To study industrial applications & its productions. ➢ Immobilization methods and their applications. ➢ To study commercial production of bio ethanol and biodiesel. ➢ Biogas production ➢ Microorganisms in bioremediation- degradation of xenobiotics. ➢ Out lines of intellectual property rights. ➢ To study patents, copy rights and trade marks.

DEPARTMENT OF ECONOMICS

SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Course outcomes

<u>Program Specific Outcomes</u> :-

The main objective of the B.A. Economics Degree is to train the students at graduate level for meeting the demands for the skilled man power in both organised and un-organised sectors and also provide an alternate channel for those who aimlessly pursue higher education and to prepare themselves for self reliance.

In this program the study of Economics opting a degree for many students to maintain Economy in their family. They planned the source of income and its proper utilization.

Economics students are known to submerge into a Syllabus that contains practical approach to the subject. They will get to assess the Indian and Andhra Pradesh Economy and also world Economy. The Economics students have rich toolbox of simple models they can use to analyze various facets of the Economy and know to apply the right models. The students are also understood the importance of a model based approach to Economics. Our goal is to produce students who have the capacity to analyze current Economic issues in the context of an Economic frame of Reference.

It is also important for students living in countries with highly open Economics to understand the important links connecting foreign Economics the anatomy of inflation and unemployment has been studied.

An overview course should contain what we feel is the core. The students to know national Income accounting, aggregate supply and demand, issues of inflation and unemployment, goods market, asset market and basics of monetary and fiscal policy. Supply details for consumption, investment, money markets and policy making. The students are also known the federal reserve and financial markets.

Finally the subject of Economics leads students to become Economists, Indian Economic Services, Indian Administrative Services, Entrepreneurs, Industrialists, Farm Managers, Bank Employees, Stock Brokers, Stock market employees, Reserve Bank Employees. Marketing Analysts etc.

COURSES OFFERED AND COURSE CODES

S.No.	Program Name	Semester	Paper Code	Course Name
1.	HEP	I	I - 1304	Micro Economics & Consumer Behavior
2.	HEP	II	II - 2304	Micro Economics – Production & Price theory.
3.	HEP	III	III – 3304	Macro Economics – National Income Employment and Money
4.	HEP	IV	IV – 4304	Banking and International Trade
5.	HEP	V	V – 5317	Economic Development and Indian Economy.
6.	HEP	V	VI – 5318	Indian and Andhra Pradesh Economy
7.	HEP	VI	VII – 6318	Agricultural Economics
8.	HEP	Certificate Course - III	-	Self Employment and its managements strategies.

Program Specific Outcome :-

PSO 1 :- Consumer behavior – has been wealth, welfare, scarcity, utility, Demand analysis, price, income, elasticity of demand, budget etc are known to the students.

PSO 2 :- Production and Price Theory : Production function and their laws total, fixed and variable costs, Marginal and average costs, concept of Revenue, Market structures, Price determination and equilibrium of firm and Industry. Monopoly – Oligopoly, Wage determination, Modern theory of wages concept of minimum wage are thoroughly known to the students.

PSO 3 :- National Income – definitions, concepts of Economy. Classical theory of Employment, Keynesian theory of Employment, consumption function, Investment function, Meaning and Functions of Money, RBI classification of Money, etc are known to the students.

PSO 4 :- Students are well aware of Trade cycles, Inflation measures, Function of Commercial Banks, Credit creation – functions of RBI, Non-Bank financial Institutions, Defects of Indian Money Market and International Trade, Taxes, Balance of payments, Public Expenditure and its effects Public Debt and Private Debt.

PSO 5 :- Economic Students are guided Economic growth of India and Andhra Pradesh Economy. Sustainable development, Labour intensive and capital intensive methods. Natural resources, population policy and concepts of population demand, unemployment, measures taken by the Government to reduce unemployment in India. Students are also aware about liberalization, privatization and globalization. Govt. Budgets, Types of budgets and their classification. Deficit Budget etc.

PSO 6 :- Students are know about Indian Agriculture, Productivity, Rural Credit, Microfinance, Self help groups. Crop insurance and Food Security. Industrial Policies, Small scale industrial polices by Govt. of India. FEMA – Service sector in India. IT, Education and Health. Planning in Indian Economy objective of Five Year plans, NITI Aayog, Andhra Pradesh Economy, SEZ etc.

Course Outcome :-

1. Students study about consumer behaviour, wealth, welfare, scarcity, utility, price, income, budgets, Demand and supply analysis.
2. Students are also aware about production of India and Andhra Pradesh Revenue generation, Market structures, Monopoly, oligopoly, wage determination, to improve the sustainability and production efficiency innovative methods.

3. Nation Income, How to increase National Income in Indian and Andhra Pradesh, Unemployment in India. Govt. Jobs and Private Jobs Investments and its importance. Role of RBI about Indian Economy. Public and Private Banks role for increasing income.
4. Inflation and its effects in India. Tax system and its reforms public expenditure and public & Private debt.
5. Economic growth of India and Andhra Pradesh. Proper use of Natural Resources are very important to increase Economic growth. Population control measures. Liberalization, Privatization, and Globalization.
6. Indian is mainly Agricultural based Economy country 60% of our country population directly (or) indirectly defend on Agriculture and Agricultural based Industries. To attract small, medium, and large Industries to reduce unemployment and increase productivity it helps for reduction of unemployment in India and increase purchase power to people it helps Indian Economy.

Economics is a positive science is divorced from reality. The science of Economics cannot be separated from the normative aspect. Economics as science is concerned with human welfare and involves ethical considerations. In this age of planning. When all nations aspire to be welfare states, it is only the Economist in a position to advocate, condemn and remedy the Economic ills of the modern world.

DEPARTMENT OF POLITICS

SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Programme Specific Outcomes

PSO1. To understand basic concepts in Political Science.

PSO2. To know the complementarities between Political Science and English Literature as majority of political thinking and writing is from the West and there is synergy in literature between the East and the West.

Course Outcomes

Sl No	Year	Course Code	Course Name	CO Number	Course Outcome
	2018-2019	1302	Basic Concepts of Political Science	CO1	To Discuss the most important political theorists in the western tradition and the ideas associated with them.
				CO2	To Describe basic political and governmental structures, processes, and policies
				CO3	To understand what is law, liberty and equality
				CO4	To have more idea on various rights and duties and also how to behave in the society
		2302	Politial Science:Concpts theories and Institutions	CO1	To understand the nature and scope of political theory.
				CO2	To understand the significance of political theory.
				CO3	To acquaint with the theories, approaches, concepts and principles of political theory.
				CO4	To appreciate the procedure of different theoretical ideas in political theory.
		3302	Indian Constitution	CO1	To have the knowledge of how governments work
				CO2	To learn and acquire in-depth knowledge of their society and how it functions

				CO3	To know about the Evolution of Indian constitution, Fundamental Duties & Supreme court functions
				CO4	to prepare for competitive exams and useful for civil service aspirants.

		4302	Indian Political Process	CO1	To have an idea on caste system in India
				CO2	To know the evolution of modernity in India
				CO3	To have overall idea on electoral trends of the loksabha from 1952 to 2004
				CO4	To understand the party system and idealogy of various parties Ex: INC, BJP, CPM, DMK, TDP etc
		5315	Indian Politcal Thought	CO1	To demonstrate knowledge of key thinkers and concepts
				CO2	To understand the nature, methods and significance of political thought.
				CO3	To analyse the theory of ancient & medieval political thought of Greek and India.
				CO4	To understand the relationship between religion and politics in early modern western political though
		6317	Principles of Public Administration	CO1	To have more idea on classical theory of Henry Foyal, decision making theory of HA Simon
				CO2	To be able to know the policy formation
				CO3	To have more knowledge on composition and functions of UPSC and APPSC
				CO4	To have knowledge on financial aministration Ex: Budgetiong, Accounting, auditiong etc
		5316	Westren Political Thought	CO1	To have an idea on western political philosophy
				CO2	To know the ideas various thikers like Plato Aristotle
				CO3	To have an idea on Modern Political Thought propounded by Hobbes Locke Rousseaue
				CO4	To have an idea on theory of JS Mill and Karl Marx

DEPARTMENT OF ZOOLOGY

SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Program Specific Outcomes

B.Sc., (BZC) (Botany, Zoology & Chemistry)

The program has been introduced to prepare the students for a bright career which finds application and provides solution to some of the major contemporary problems on the globe i.e., providing food for growing population, designing advanced medical treatment options for increasing evolving diseases, to find solutions for wild life conservation and to deteriorating environment caused due to over exploitation / misuse of natural resources etc.,

In this program the study of Biology offers around the world where there are Biologists making a difference to our lives – ensuring our food is safe, treating and preventing disease, developing green technologies or tracking the role of Organisms in climate change.

In this program the knowledge about the subject chemistry comes in to play when structures of macromolecules and their interactive relations to the environment are to be understood.

Finally the subject Biology amalgamates with various disciplines of sciences and offers ethically acceptable knowledge to bring about sustainable solutions for a variety of problems related to Ecology, Evolution, Agriculture, Environment and Quality of human life. These problems are solved with responsibility using appropriate tools while keeping in mind safety factor of Environment and Society.

Courses offered and course codes from 2012-20

S. No.	Program name	Semester	Paper & Course code	Course name
1.	BZC	I	I - 1107	ANIMAL DIVERSITY NON-CHORDATES
2.	BZC	I	I - 1107	ANIMAL DIVERSITY NON-CHORDATES
3.	BZC	II	II - 2107	ANIMAL DIVERSITY CHORDATES
4.	BZC	II	II - 2107	ANIMAL DIVERSITY CHORDATES
5.	BZC	III	III - 3107	CYTOLOGY, GENETICS & EVOLUTION

6.	BZC	III	III - 3107	CYTOLOGY, GENETICS & EVOLUTION
7.	BZC	IV	IV - 4107	ANIMAL PHYSIOLOGY, ECOLOGY & ZOOGEOGRAPHY
8.	BZC	IV	IV - 4107	ANIMAL PHYSIOLOGY, ECOLOGY & ZOOGEOGRAPHY
9.	BZC	V	V - 5135	ANIMAL BIOTECHNOLOGY
10.	BZC	V	V - 5135	ANIMAL BIOTECHNOLOGY
11.	BZC	V	VI - 5136	ANIMAL HUSBANDARY
12.	BZC	V	VI - 5136	ANIMAL HUSBANDARY
13.	BZC	VI	VII - 6144	IMMUNOLOGY
14.	BZC	VI	VII - 6144	IMMUNOLOGY
15.	BZC	VI	VIII-A - 6145	PRINCIPLES OF AQUACULTURE
16.	BZC	VI	VIII-A - 6145	PRINCIPLES OF AQUACULTURE
17.	BZC	VI	VIII-B - 6146	AQUACULTURE MANAGEMENT
18.	BZC	VI	VIII-B - 6146	AQUACULTURE MANAGEMENT
19.	BZC	VI	VIII-C - 6147	POST HARVEST TECHNOLOGY
20.	BZC	VI	VIII-C - 6147	PROJECT

PROGRAMME SPECIFIC OUTCOME

PSO 1: Understand The program Botany, Zoology and chemistry has been introduced to prepare the students for a career which finds application and provides solution to some of the major contemporary problems on the globe i.e., providing food for growing population, designing advanced medical treatment options for increasing evolving diseases, to find solution to deteriorating environment caused due to over exploitation / misuse of natural resources etc.,

PSO 2: In this program the study of Biology offers around the world there are biologists making a difference to our lives – ensuring our food is safe, treating and preventing diseases, developing green technologies or tracking the role of organisms in climate change.

PSO 4: In this program the knowledge about the subject chemistry come in to play when structures of macromolecules and their interactive relations to the environment are to be understood.

Finally the subject biology amalgamates the various disciplines of sciences and offers ethically acceptable knowledge to bring about sustainable solutions for a variety of problems related to Ecology, Evolution, Agriculture, Environment and Quality of human life. These problems are solved with sole responsibility of using appropriate tools while keeping in mind safety factor of Environment and society.

COURSE OUTCOME

S.NO	COURSE OUTCOME
CELL BIOLOGY AND MICROBIOLOGY	
1	To learn about contributions of various scientists in the field of Biology and the microscopy, various staining methods useful for the study of micro organisms in detail. To be motivated to pursue research through keen observations.
2	To study in detail about Microorganisms like bacteria and viruses - their structure, life cycle, history, classification and their importance. To apply the knowledge about microorganisms in daily life like maintaining hygiene, and taking food rich in probiotics for healthy life.
3	To study the food habits of diverse microorganisms under the name microbial nutrition. To acquire the ability to decide which nutrition should be supplied to a particular microorganism for its growth and to apply this knowledge for carrying out project.
4	To know about the favourable and unfavourable conditions, growth properties, mechanisms to control growth of microbes. To use this knowledge in controlling harmful microorganisms and thus avoiding occurrence of infectious diseases.
5	To study the detailed structure and the sub cellular structures, various mechanisms occurring in the eukaryotic cell, which helps in designing drugs in case there is abnormal cell division etc.
MACROMOLEULES, ENZYMOLOGY AND BIOENERGETICS	
6	To know about the discovery, structure and properties, stabilizing forces of various kinds of DNA. The understanding of the basic molecule of life like DNA for inspiring research in various fields and specifically in life science for gene therapy, designing drugs etc.
7	To know about the structures, classification physico-chemical properties of the building blocks of proteins i.e., amino acids. To learn about the mechanism of diseases resulting due to abnormal protein structures.
8	To learn about the classification, structure, nomenclature and importance of a major nutrient that is carbohydrate. To learn about the polysaccharides present in nature and various conditions arising due to lack of improper intake of carbohydrates.
9	To learn about the structure, classification, nomenclature, inhibition, kinetics of the enzymes the knowledge of which is useful for application in medical field to cure diseases arising due to non-functional or absence of enzymes.
10	To study regulation, inhibition, Bypass reactions of various pathways taking place in living cells in detail as any abnormalities or diseases arising due to dysregulation of the pathways is easily understood and solution can be provided through research.

11	To acquire knowledge on the principle, basic concepts, instrumentation, applications, types of spectrophotometry are studied and this knowledge is applied for estimation of biomolecules like DNA, Proteins, Coloured solutions etc.
BIOPHYSICAL TECHNIQUES	
12	To learn about the principle, mechanism, equipment and applications of separation of biomolecules, pigments etc., is learnt. This knowledge is useful in isolating certain molecules in pure form.
13	To be able to design and carry out appropriate PCR based DNA detection assays and to apply gel electrophoresis in DNA detection and quantification, Evaluate appropriate methods for mutation detection, Use Bioinformatics tools for DNA sequence analysis.
14	To learn about Isotopic tracer techniques - how to calculate the Measurement of radioactivity, different principle, advantages, disadvantages instrumentation techniques of counters, mass spectroscopy and they can learn how to apply different isotopes in biotechnology.
15	To learn the basic principles, concept and types of centrifuges to isolate cell components and determine molecular weight by sedimentation velocity and sedimentation equilibrium methods. To learn the basic concepts of mean, median, mode and standard deviation and standard error, Anova using to calculate problems,
IMMUNOLOGY	
16	To learn about the basic mechanisms, distinctions and functional interplay of innate and adaptive immunity and the cellular/molecular pathways of humoral/cell-mediated adaptive responses.
17	To learn about the structure, classes, types of Antibody and Antigens and factors affecting antigenicity.
18	To understand how disease causing microorganism can be used as a weapon to fight against the same microorganism.
19	To get better understanding about vaccination, blood transfusion, grafting etc.
20	To gain knowledge that helps to take up research to find medicines for present incurable diseases.
GENETICS AND MOLECULAR BIOLOGY	
21	To study about macromolecules responsible for life on earth.
22	To acquire knowledge on organelle genome organization and various gene families.
23	To know the level of expression by transcription and translation.
24	To learn the molecular mechanisms responsible for diseases and may take up research in this field.

DEPARTMENT OF HINDI

Semester wise course outcome of Hindi Language for I, II & III Sems

Course Outcome for I & II Sems (B.A., B.Com., B.B.A. and B.Sc.,)

CO 1	हहहहहह हह हहहह हहहहहहहहह हह हहहहहहहहह हह हहहहह हहहहह
CO 2	हहहहहह हहहहहहह हह हहहहह हहहहहहह हह हहहह हहहहह हहह हहहहहहह हह हहहहहह हह हहहहहह हहहहहह
CO 3	हहहहह हहहह हह हहहहहह हह हहहहहहहहहहहहह हहहहह
CO 4	हहहहहहह हह हहहहह हहहहह , हहहहहहह हहहहहहहहहह हह हहहहह हहहहहह हहहहह
CO 5	हहहहहहहहह हहहह , हहहहहहह हहहहह, हहहहहहहहहह हहह हहहहहहह हह हह हहहहह हहहहहहह हहहह हहह हहहहह हहहहह , हहहहहहह हहहहहहह हह हहहहह हहहहह हहहहहहह हहहहह
CO 6	हहहह हह हहहहहहहह हहहह , हहहह हहहहह , हहहह हहहह हहह हहहह हह हहहहह हहहहहह हहहह हहह हहहहहह हहहह हह हहहहहह – हहहहहह हहहहह
CO 7	हहहहहहह हह हहहहहहहहहह हहहहह हहहहहहह हहहहह
CO 8	हहहहहह हह हहहहहहहहहह हह हहहहहहहहहह हहहह हहह हह हहहहह हहहहहह
CO 9	हहहह हह हहहहहहह हह हहहहहह हहहहहहह हह हहहहह हहहहहह

DEPARTMENT OF HINDI

Course Outcome of Hindi Language
for III Sem (B.A., B.Com., B.B.A. and B.Sc.,)

CO 1	हहहहहह हह हहहह हहहहहहहहह हह हहहहहहहहह हह हहहहह हहहहह
CO 2	हहहहह हह हहहहहह हह हहहहहहहह हहहहह हहहहहह
CO 3	हहहहहह हहहहहहह हह हहहहहहह हह हहहहहह
CO 4	हहहहहह , हहहहहहहह , हहहहहहह , हह हहहहहह हह हहहहहहहहहहह हह हहहहहहहहह हहहहह हहहहहह
CO 5	हहहह , हहहहहह , हहहह हहह हहहहहह हह हहहहहहहह हहहहहह
CO 6	हहहहहहह हहहहहहह हह हहहहहह हह हह हहहहह हहहहहहहह हह हहहहहह
CO 7	हहहहहह हहह हहह हहहहहहह , हहहहहह्ह हहहहहहहहह , हहहहहह हहहहह हह हहहहहह हहहहहहह हहह हहह हहह हहहहह हह हहहहहहहहहह हहहहहह
CO 8	हहहहहहह हह हहहहहहहहह हह हहहहहह हहह हहहहहह हहहह हह हहह हह हहहहहह हहहहह

DEPARTMENT OF HINDI

Programme Outcome of Hindi Language
for I, II & III Sems (B.A., B.Com., B.B.A. and B.Sc.,)

PO 1	हहहहहहह हहह हहहह हहहह हह हहहहहह हह हहहहह हहहहह
PO 2	हहहहहहह हहहहहहह हह हहहहहह हह हहहहहह हहह हहहहहह हहहहहहह हह हहहहह हहहहहहहह ह
PO 3	हहहह हह हहहहहहह , हहहहहहह हह हहहह हह हहहहह हहहहह हह हहहहह हहहहह
PO 4	हहहहहहह हह हहहहहह हहहह हहहहहह हह हहहहहहहहह हह हहहहहहह हहहहह
PO 5	हहहहहह हहहह हह हहहहहहह हह हहहहह हहहहहह
PO 6	हहहहहहह हहह हहह हह हहहहह हहहह हहहहहह
PO 7	हहहहहह हह हहहहहह हहहहहह हहहह हह हहहह हहह हहहहहहह हह हहहहहह हहहहह हह हहहहह हहहहह ह
PO 8	हहहहहहह हह ICT हहहहह हहहह हहहहह

DEPARTMENT OF HINDI

Programme Specific Outcome of Hindi Language (B.A., B.Com., B.B.A. and B.Sc.,)

PSO 1	हहहहहहह हहह हहहहहहह हहहह , हहहह ,हहहहहहहह हहहहह हहहहहह हह हह हहहहह
PSO 2	हहहहहह हहहह हहह हहहहहह हह हहहह हहहहहहह हहहहह हहहह हहहहहहह हहह हहहहहहह हहहहह
PSO 3	हहहहहहहहह हहहह हह हहहहह हहहहहहहहहह हहहहहहहहह हहहहहह
PSO 4	हहहहहहह हहह हहहहहहह हह हहहहह हहहहहह
PSO 5	हहहहहहह हह हहहह हह हहहहह हहह हहहहहहहहहह हहह हहहहहह हहहहह
PSO 6	हहहहहहह हहह हहहहहहहहहह हहह हहहहहहहहहह हह हहहहहहह

DEPARTMENT OF AZC

SRI Y N COLLEGE (AUTONOMOUS): NARSAPUR

Program Specific Outcomes:-

B.Sc., AZC (Aquaculture, Zoology & Chemistry)

The main objective of the AZC Degree Course is to train the students at graduate level for meeting the demands for the skilled man power in both organised and unorganized sectors and also provide an alternate channel for those who aimlessly pursue higher education and to prepare themselves for self reliance.

In this program the study of Aquaculture / Fisheries opting a degree for many students to maintain aquatic life and to elevate its protection.

Aquaculture students are known to submerge into a syllabus that contains a practical approach to the subject. They will get to assess the population of fisheries, control fish hatcheries and aquaculture environments and even monitor and enhance aquatic environments.

Finally the subject of Aquaculture leads students to become aquaculture entrepreneurs, aquaculture farm managers, hatchery managers, fishery officers, research officers, science officers, lecturers, quality control specialists (specially aquatic food), scientists and consultants – it‟s a field with plenty of opportunity for growth.

Courses offered and Courses Codes from 2012-2020

S. No.	Program Name	Semester	Paper & Course Code	Course Name
1	AZC	I	I – 1114	Basic Principles of Aquaculture.
2	AZC	I	I – 1114	Principles of Aquaculture
3	AZC	II	I – 2114	Biology of fin fish & shell fish
4	AZC	II	II – 2114	Biology of fin fish & shell fish
5	AZC	III	III – 3114	Fish Nutrition & Feed Technology
6	AZC	III	III – 3114	Fish Nutrition & Feed Technology
7	AZC	IV	IV – 4114	Fresh Water & Brackish water Aquaculture
8	AZC	IV	IV – 4114	Fresh Water & Brackish water Aquaculture
9	AZC	V	V – 5143	Fish Health Management
10	AZC	V	V – 5143	Fish Health Management
11	AZC	VI	VI – 5144	Fisheries Extension, Economics & Marketing.
12	AZC	VI	VI – 5144	Fisheries Extension, Economics & Marketing.
13	AZC	VII	VII – 6157	Fishery Engineering
14	AZC	VII	VII – 6157	Fishery Engineering

Programme Specific Outcome :-

PSO 1 : Aquaculture technology has been introduced to prepare the students which finds the main modules of aquaculture with traces of Biology, Chemistry and Laboratory Science before moving to more specific topics like Fish Hatchery Management, Organic Biology, Fish Orientation and ecology.

PSO 2 : This course guide the students how to manipulate aquatic environments to achieve better results in the manner of productivity and protect endangered species from diseases.

PSO 3 : In this program the knowledge about the Aquaculture technology also delves into the legal, ethical, techonological and environmental waters and unravels the fields of aquaculture and business, spawning technologies, water quality and methods of production, fish genetics, fish diseases, biostatistics and fish nutrition.

PSO 4 : Ultimately, a bachelor degree in aquaculture grants the tools needed to establish sustainable solutions for marine and fresh water bodies conservation. It inspires the students to play a part in saving our planet.

Course Outcome :-

S.No.	Course Outcome
	Fish Nutrition:
1.	To study about the fish"s digestive system and various nutrient"s digestion, absorption, metabolism and biochemical function. It also overs relevant undesirable substances in feed that can be a challenge for the health and for the seafood product produced.
2.	To determine optimal nutrient supplementation levels for specific life stages of improved feed.
3.	To improve the sustainability and production efficiency by developing innovative feeds that reduce dependence on fishery resources.
4.	To determine nutritional value of alternative ingredients (Protein, Lipid, Energy) and develop practical feed formulations for improved strains of feed.

Fishery Management :-

5. To determine total yield from the experimental fishery.
6. To understand seasonal species, sex, size and maturity composition of fish caught in a range of different experimental gear types.
7. To maintain the target species at or above the levels of necessary to ensure their continued productivity.
8. To minimize the impacts of fishing on the physical environment and on non-target (by-catch), associated and dependent species.
9. To maximize the net incomes of the participating fishers.
10. To maximize employment opportunities for those dependent on the fishery for their livelihoods.

Fish Health Management :-

11. To understand exclusion of pathogens through reliable sources of eggs, juveniles and brood stock, guarantine, eradication programs and long term policies.
12. To Know the management of diseases from pathogens present in environment.
13. To improve fish health, FCR"s and hence economic returns.
14. To identify risks posed at various stages of culture cycles.

Ecology :-

15. To understand the nature of environmental influences on individual fin fishes and shell fishes, their populations and communities.
16. To study the inter-relationship between biotic and abiotic components of nature as well as the relationship among the individuals.
17. To study the structural adaptations and functional adjustment of organisms to their physical environment.
18. To study the local distribution of aquatic animals in various habitats.

SANSKRIT COURSE OUTCOMES

SEM – 1 "POETRY AND GRAMMAR"

Course Outcomes

CO1: Describe Language and Literature of Sanskrit various genres of Sanskrit literature. (K2)

CO2: Illustrate the ancient Sanskrit literature – the Grammar aspects of poetry. (K3)

CO3: Produce moral values through teaching of Sanskrit poetry and other literature – such as Subhashithas, Panchatantra stories, etc. (K3)

CO4: Develop functional Communication skills in Sanskrit Language. (K3)

SEM – II "PROSE AND GRAMMAR"

Course Outcomes

CO1: Differentiate the ancient and modern prose Texts in Sanskrit with emphasis on the prescribed ones. (K4)

CO2: Compare the writing styles of different writers in Sanskrit. (K5)

CO3: Develop Sanskrit vocabulary for better understanding and better communication. (K3)

CO4: Illustrate the uses of Sanskrit language in modern world and apply the knowledge acquired to make basic conversation and basic writing in Sanskrit. (K3)(K4)

SEM – III "DRAMA, UPANISHAD, ALANKARAS & HISTORY OF SANSKRIT LITERATURE"

Course Outcomes

CO1: Demonstrate the evolution of Sanskrit Drama Language, Character, Plot etc. used in Dramas. (k3)

CO2: Explain the dialogues in Sanskrit drama with emphasis on vocabulary and understand how these help in spreading moral values and social messages. (K3)

CO3: Distinguish the Vedic Sanskrit in Upanishads the literary Sanskrit used in Dramas. (K3)

CO4: Correlate different language and grammatical aspects in Dramas. (K4)

Department of Chemistry

Programme Outcome: B. Sc Chemistry

After successful completion of three year degree program in Chemistry a student should be able to;
PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of chemistry. **PO-2.** Solve the problem and also think methodically, independently and draw a logical conclusion. **PO-3.** Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions. **PO-4**. Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community. **PO-5.** Find out the green route for chemical reaction for sustainable development. **PO-6.** To inculcate the scientific temperament in the students and outside the scientific community. **PO-7.** Use modern techniques, decent equipments and Chemistry software's

Programme Specific Outcome

B.Sc. - MATHEMATICS, PHYSICS, CHEMISTRY (M.P.C.)

Program specific outcome

PSO1: Becomes professionally skilled for higher studies in research institutions and to work in chemical industries.

PSO2: In-depth knowledge helps to qualify in competitive exams.

PSO3: Gains complete knowledge about all fundamental aspects of Chemistry

PSO4: Understands the background of organic reaction mechanisms, complex chemical structures, and instrumental method of chemical analysis, molecular rearrangements and separation techniques.

PSO5: Ability to interlink the skills and knowledge in mathematics, physics and chemistry and develop an aptitude to address the problems in various fields.

PSO6: Analyse the concepts of mathematics, physics and chemistry and understand the relation among them like physical chemistry, mathematical modelling of physics and chemistry problems.

PSO7: Understand the theoretical concepts of physical and chemical properties of materials and the role of mathematics in dealing with them in a quantitative way.

B.Sc. - MATHEMATICS, CHEMISTRY, COMPUTER SCIENCE (M.C.Cs.)

Program specific outcome

PSO 1: Ability to apply knowledge of computing that may be relevant and appropriate to the domain.

PSO2: Ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution.

PSO 3: Understanding of best practices and standards to develop user interactive and abstract application. An ability to assist and manage the execution of an effective project plan.

PSO4: Ability to interlink the skills and knowledge in mathematics, physics and chemistry and develop an aptitude to address the problems in various fields.

PSO5: Analyse the concepts of mathematics, physics and chemistry and understand the relation among them like physical chemistry, mathematical modelling of physics and chemistry problems.

PSO6: Understand the theoretical concepts of physical and chemical properties of materials and the role of mathematics in dealing with them in a quantitative way.

B.Sc. - BOTANY, ZOOLOGY, CHEMISTRY (B.Z.C.)

Program specific outcome

PSO1: Apply the knowledge of biology to make scientific queries and enhance the comprehension potential.

PSO2: Practical applications: Identify and classify plants according to the principles of plant systematics, apply techniques like plant propagation methods, organic farming, mushroom cultivation, preparation of bio fertilizers, bio pesticides etc. in daily life.

PSO3: To understand principles of origin of life and its evolutionary trends, Microbial diversity, chemical theory related to origin of life.

PSO4: To analysis the taxonomic range of various life forms as per their external characters and internal chemical constitutions (chemo taxonomy).

PSO5: The knowledge about of ecological and phyto geographical studies related in environmental biodiversity with biotic and abiotic factors.

PSO6: Skills to study the principles of tissue culture techniques in biology leads to various diversity of life forms (hybrids) by using chemically synthesised growth hormones.

B.Sc. - CHEMISTRY, BIOTECHNOLOGY, MICROBIOLOGY (C.B.M)

Program specific outcome

PSO1: 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.

PSO2: Acquire knowledge in domain of biotechnology enabling their applications in industry and research.

PSO3: To gain knowledge about the application of various types of Microscopy. To classify and explain the structure and general characteristics of micro organisms.

PSO4: Students will possess hands-on technical skills necessary to support biotechnology research activity.

PSO5: Students will be able to acquire, articulate, retain and apply knowledge relevant to microbiology.

PSO:6 The design and execution of the experiment should demonstrate an understanding of good laboratory and the proper handling of chemical waste streams and also explain how the applications of Chemistry relates to the world.

B.Sc. - Zoology, Chemistry, Aquaculture (Z.C.A)

Program specific outcome

PSO1: The student will acquire an understanding of the biology of different types of aquaculture products (fish / molluscs etc.)

PSO2: To know the basis of technologies of fisheries and *aquaculture*, to understand the principles of its importance, purpose and application.

PSO3: Students will understand and adapt scientific knowledge in aquaculture and natural resource conservation planning and development.

PSO4: Recognize and apply the principles of atomic and molecular structure to predict chemcical properties and chemical reactivity.

PSO5: To understand about various animal species, based on Phylum.

PSO6: Get an exposure to different process used in industries and their application.

PSO7: Recognize and apply the principles of atomic and molecular structure to predict chemical properties and chemical reactivity.

COURSE OUTCOMES B.Sc., Chemistry Semester-I	
COURSE	**COURSE OUTCOMES**
I Year B.Sc., Chemistry Paper I	**Content 1: p-block elements :** Course outcome: • To describe the trends in the physical and chemical properties of group 13 to group 17 elements. Know the Chemistry of some important compounds of Boron, Carbon, and Silicone etc. • Able to tell the name of orbitals by recognizing shapes oforbitals. • Able to draw structures of different ionic solids • To know about Inter halogen compounds and pseudo halogens **Content 2: Organometallic compounds** Course outcome: • To know the Definition and classification of organometallic compounds, Nomenclature, preparation, properties andapplications of alkyls of Li and Mg elements. **<u>UNIT - II (Organic Chemistry)</u>** **Content 3: Structural theory in organic chemistry :** Course outcome: • To Identify and judge the structure, type of reaction, mechanism • To identify chemical behavior of an organic compound during its transformation from reactants to products. • To identify the reason for the aromaticity of various organic compounds that is used in the manufacturing of manyproducts. • To understand the importance of Structural theory in the organic chemistry which provides a strong basic knowledge for the students that helps in their further studies. **Conetnt 4: Alicyclic hydrocarbons (Cycloalkanes)** Course outcome: • To study about nomenclature, synthesis, isomerism andphysical properties of alkanes and cycloalkanes. • To study about the isomerism and types of isomerism. • Understand the nomenclature, synthesis, isomerism andphysical properties of alkanes and cycloalkanes • Understand various types of reactive intermediates and factors affecting their stability . **Content 5: Benzene and its reactivity** Course outcome: • Understand the concept of resonance energy. Concept of aromaticity - General mechanism of electrophilic substitution, mechanism of nitration. Friedel Craft"s alkylation and acylation. Orientation of aromatic substitution - Definition of ortho, para and meta directing groups. Ring activating and deactivating groups.

Semester-II	
COURSE	**COURSE OUTCOMES**
I Year B.Sc., Chemistry Paper II	**UNIT - I (Physical Chemistry)** **Content 1: Solid State:**Course Outcome: • To gain knowledge on the Symmetry of crystals and lawof Symmetry. • Students should be able to describe the characteristic of the three states of matter. • To understand the concepts of Defects in crystals. • To learn about Bragg‟s Equation. **Content 2: Gaseous State:** Course Outcome: • The students will be able to compare and contrast thechemical behavior and physical properties of common substances. • Students should be able to determine the difference between solids, liquids and gases. • To learn about liquefaction of gases i) Linde‟s method ii) Claude‟s method. • To learn Vander waal‟s equation of state. **Content 3: Liquid State:** Course Outcome: • To know about the Classification of liquid crystals and its applications. • Students will be able to give examples of solids, liquids and gases. • Students will be able to define what matter is and where you can find it. **Content 4: Solutions:** Course Outcome: • Students will describe the relationship between partial pressures and total pressure as described in Dalton‟s Law of partial pressure. • To know about the Raoult‟s law, Henry‟s law Nernst distribution law • To gain knowledge on the partially miscible water systems **<u>UNIT - II(General Chemistry)</u> Content** **5: Surface chemistry:** Course Outcome: • To know the definition preparation, purification and properties of Colloids. • To Learn about adsorption isotherms • To gain knowledge on the Liquid in liquidemulsions **Content 6: Chemical Bonding:** Course outcome: • To know about the Valency bond theory and Molecularorbital Theory. • To learn LCAO method and M.O Diagrams of Diatomic molecules. **Content 7: Stereochemistry of carbon compounds:**Course outcome: • To gain knowledge on Optical isomerism and optical activity • D,L R,S and E,Z configuration • To know the definition of enantiomers and diastereomers.

Semester-III	
COURSE	**COURSE OUTCOMES**
II Year B.Sc., Chemistry Paper III	**UNIT - I (Inorganic Chemistry)** **Content -1: d-Block Elements:** Course Outcome • Will be able to predict magnetic and spectral properties of d-blockelements • Can be able to identify the Stability of various oxidation states. • Can be able to explain catalytic properties and ability to form complexes. • To study d block elements which is useful in determination of colored complex formation in Dye industry **Content -2: Theories of bonding in metals:** Course Outcome: • Can be able to explain Definitions of conductors, semiconductors and insulators • Can be able to identify thermal and electrical conductivity of metals **Content -3: Metal carbonyls:**Course Outcome: • Can be able to explain EAN rule • Can be able to identify structures and shapes of metalcarbonyls • Will be able to predict Effective Atomic number of various compounds. **Content -4: f-block elements:**Course outcome: • Will be able to predict magnetic and spectral properties of d-block elements. • Can able to predict the type of symmetry present in the given molecules. **UNIT - II (Organic Chemistry)** **Content -5: Halogen compounds:**Course outcome: • To gain command on **SN**^{1} and **SN**^{2}–reaction mechanism. • Can be able to explain Nucleophilic aliphatic substitution reactions. • **Content -6: Hydroxy compounds:** Course outcome: • To identify the reason for the Identification of alcohols by oxidation with $KMnO_4$, Ceric ammonium nitrate, Lucasreagent • Studying about oxidizing and reducing Reagents, reactions and their mechanisms • To learn about Bromination, Kolbe-Schmidtreaction, Riemer-Tieman reaction, Fries rearrangement, azo coupling, Pinacol-Pinacolone rearrangement. • **Content -7: Carbonyl compounds:**Course outcome: • To understand the importance of Structural theory in the organic chemistry which provides a strong basic knowledge for the students that helps in their further studies. • To Identify and judge the structure, type of reaction, mechanism and chemical behavior of an organic compound during its transformation from reactants to products. • Will be able to predict synthesis of ketones from nitriles and from carboxylic acids **Content -8: Carboxylic acids and derivatives:**Course outcome: • To understand the ways in which mono, di and unsaturated carboxylic acids are easily prepared by at industrial level • To learn about Degradation of carboxylic acids by Huns-Diecker reaction, decarboxylation by Schimdt reaction **Content -9: Active methylene compounds:** Course outcome • To understand Preparation of a) monocarboxylic acids. b) Dicarboxylic acids. c) Reaction with urea • To know about the applications in other fields such as organic reaction mechanisms.

SEMESTER-IV	
COURSE	**COURSE OUTCOMES**
II Year B.Sc., Chemistry Paper IV	**UNIT – I (Spectroscopy)** **Content -1: Spectrophotometry:** Course outcome: • To understand the ways in transmittance, Absorbance, and molar absorptivity of Beer-Lambert's law • To acquire knowledge on application of Beer-Lambert law for quantitative analysis. **Content -2: Electronic spectroscopy:** Course outcome: • To analyze the sample materials by using spectrophotometer in research and development. • To know the Selection rules for electronic spectra. **Content -3: Infra red spectroscopy:** Course outcome: • To acquire the knowledge of handling sophisticated instruments like spectrophotometer which are used to identify functional groups(I.R) • Characteristic absorption bands of various functional groups • To learn about atomic absorption, emission and fluorescencespectroscopes, electro analytical methods and radio chemical methods **Content -4: Proton magnetic resonance spectroscopy (^{1}H-NMR):** CO: • Will be able to know N.M.R technique is useful in quality control and research for determining the contents and purity of a sample as well as its molecular structure. • Determine the impurities and conjugation in organic compound and biological macro molecules **UNIT – II (Physical Chemistry)** **Content -5: Dilute solutions:** Course Outcome: • To gain command on Dilute Solutions, Elevation of B.P. & depression of Freezing point, osmotic pressure, colligative properties • To acquire knowledge on Raoult's law, relative lowering of vapour pressure, its relation to molecular weight of non-volatile solute **Content -6: Electrochemistry-I:** Course Outcome: • To acquire knowledge on Application of conductivity measurements-conductometric titrations. • Students should be able to describe the different physical properties of each state of matter. **Content -7: Electrochemistry-II:** Course Outcome: • To understand the Nernst distribution law – its thermodynamic derivation, modification of distribution law when solute undergoes dissociation, association and chemical combination. Applications of distribution law • Able to derive relationship between modification of distribution law when solute undergoes dissociation **Content -8: Phase rule:** Course Outcome: • Able to derive relationship between modification of distribution law when solute undergoes dissociation • To understand thermodynamic terms: system, surrounding etc. Types of systems, intensive and extensive properties. State and path functions and their differentials • Able to predict the energy change in heat capacities at constant volume and pressure and their relationship.

SEMESTER-V	
COURSE	**COURSE OUTCOMES**
III Year B.Sc., Chemistry Paper V	**<u>Content 1: Coordination Chemistry:</u>** 1. To be able to use Crystal Field Theory to understand themagnetic properties of coordination compounds. 2. To be able to describe the shapes and structures of coordination complexes with CN 4 & 6 3. To be able to recognize the types of isomers in coordination compounds. 4. To be able to name coordination compounds and to be able to drawthe structure based on its name. 5. To become familiar with some applications of coordination compounds. At the end of the course, the student has acquired knowledge on the chemistry of coordination compounds and their properties as well as the principal laboratory methodologies for the synthesis and characterization of coordination compounds. **<u>Content 2: Spectral and magnetic properties of metal complexes:</u>** Student will be able to know the Electronic absorption spectrum of complex ions. Types of magnetic behavior, spin-only formula, calculation of magnetic moments, Experimental determination of magnetic susceptibility **<u>Content 3: Stability of metal complexes:</u>** To be able to describe the Thermodynamic stability and kinetic stability of metal complexes. **<u>Content 4: Nitro alkanes:</u>** To be able to know the -Tautomerism of nitroalkanes leading to aci and keto form, Preparation and chemical reactivity of Nitroalkanes. **<u>Content 5: Amines:</u>** To be able to learn Classification into 1°, 2°, 3° Amines, preparative methods and chemical properties of amines. **<u>Content 6: Cyanides and Isocyanides:</u>** To be able to know the Preparation of Cyanides from: a) Alkyl halides b) from amides c) from aldoximes. Preparation of Isocyanides from: Alkyl halides and Amines. Chemical properties of Cyanides and Isocyanides: **<u>Content 7: Thermodynamics</u>:** 1. Define the meaning of the state of a working substance. 2. Understand concepts of heat, work, and energy. 3. Explain basic thermodynamic properties and units. 4. Develop and apply the continuity equation for open and closed systems. 5. Derive and discuss the first law of thermodynamics. 6. Discuss basic thermodynamic cycles and systems. 7. Apply the second law of thermodynamics to thermal cycles.

SEMESTER -V	
COURSE	**COURSE OUTCOMES**
III Year B.Sc., Chemistry Paper VI	**UNIT –I (Inorganic Chemistry)** REACTIVITY METAL COMPLEXES: COURSE OUTCOMES: • Can be able to explain the substitution reactions of square planar complexes • To understand the biological significance of Na,Mg,Ca,Fe,Co,Ni,Cu,Zn and Cl^-. • To learn about Trans effect and its application. • Can be able to draw and explain the structure and functions of haemoglobin, myoglobin and chlorophyll. **UNIT –II (PHYSICAL CHEMISTRY)** CHEMICAL KINETICS: COURSE OUTCOME: • To know about the Order and Molecularity. • Can be able to derive the Rate constants for First, Second, Third and Zero order reactions and examples. PHOTO CHEMISTRY: COURSE OUTCOME: • To gain the knowledge about Laws of Photo chemistry-Grothus Drapers law and stark-Einsteins law of photochemical equivalence. • To be able to predict the Qualitative description of fluorescence, phosphorescence, photosensitized reactions. **UNIT-III(ORGANIC CHEMISTRY)** HETEROCYCLIC COMPOUNDS: COURSE OUTCOME: • To study about the five membered ring compounds with onehetero atom. • Will be able to predict the Electrophylic substitution at 2 or 5 positions Halogenation, Nitration and Sulphonation. CARBOHYDRATES:COURSE OUTCOME: • Will be able to explain the cyclic structure ofGlucose. • To predict the cyclic structure of Fructose. • Can be able to explain the formation of Osazone from Glucose and Fructose. AMINO ACIDS AND PROTINES: COURSE OUT COME: • To learn about the definition and classification of amino acids. • To understand the preparation of alpha aminoacids. • To learn about the zwitter ion. • Will be able to predict the peptides and proteins.

SEMESTER-VI	
COURSE	**COURSE OUTCOMES**
III Year B.Sc., Paper-VII (Elective paper) ENVIRONMENTAL CHEMISTRY	**Content 1: Environmental Chemistry-Introduction:** Course Outcome: Demonstrate knowledge of chemical and biochemical principles of fundamental environmental processes in air, water, and soil. Apply basic chemical concepts to analyze chemical processes involved different environmental problems (air, water & soil). **Content 2: Air pollution:** Ability to identify air pollution problems and interpret air quality data on chemical characteristic. Ability to recognize various biotic and abiotic environmental transformation processes of pollutants. **Content 3: Water Pollution:** After studying this course, student should be able to: describe the chemical ... describe the main sources of *water pollution*, the main types of pollutant and how each type may be *controlled*. Outline the extent of *water pollution*. **Content 4: Chemical Toxicology:** Explain the basic concepts of chemical hazard and exposure as determinants of chemical toxicity. Describe key pathways and mechanisms of chemical absorption, distribution, metabolism, storage and excretion in the human body. Explain dose-response relationships as the basis of toxicity. **Content 5: Ecosystem:** define the basic rules and concepts of the ecology science. Define all biotic and abiotic factors that are related to individual, population, community and ecosystem and defines the relationships between them. Define the ecosystems and material cycles. **Content 6: Biodiversity:** To determine the best predictors of success for protected areas in conserving biodiversity ("biodiversity outcomes", such as population increase, or decreased rate of decline), and to establish mechanisms to maintain such analysis into the future.
SEMESTER-VI	
COURSE	**COURSE OUTCOMES**
III B.SC CLUSTER ELECTIVE – 1	**FUEL CHEMISTRY AND BATTERIES** **UNIT-I** • Will be able to know about the fuels and their calorific values. • Can be able to know the composition of coal gas ,water gas, producer gas and their manufacture **UNIT-II** • Will be able to get knowledge of composition of crude oil • Can be able to know the refining process of crude oil **UNIT-III** • Can be able to get the knowledge of converting crude oil and natural gas into various effective fuels of high calorific value like LPG, CNG, petrol etc., • Can be able to know the composition and importance of variousfuels **UNIT-IV** • Will be able to know about the lubrication process and various typesof lubricants and their properties **UNIT-V** • Able to know the difference between primary and secondary batteries. • Can able to know the construction and working of various batteries

III B.Sc CLUSTER ELECTIVE –2	**INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE** **UNIT-I: RECAPITULATION OF s- AND p-BLOCK ELEMENTS:** COURSE OUTCOMES: • Will be able identify the periodicity in s- and p- block elements with respect to electronic configuration, atomic size, ionization enthalpy, electronegativity. • To learn about the inert pair effect, diagonal relationship and anomalous behaviour of first member of each group. **UNIT-II: SILICATE INDUSTRIES:** COURSE OUTCOMES: GLASS: • Will be able to explain the glassy state and its properties. • To able to identify the composition of soda lime glass, lead glass, safety glass, and photosensitive glass. CERAMICS: • Will be able to predict the classification of cement, ingredients and their role. • Can be able to explain the manufacture of cement setting process, quick setting cements. **UNIT-III: FERTILIZERS:** COURSE OUTCOMES: • Can be able to identify the different types of fertilizers. • Will be able to manufacture of the urea, ammonium, nitrate, calcium ammonium nitrate, amomonium phosphate, polyphosphate, superphosphate, compound and mixed fertilizers, potassiumchloride, potassium sulphate.
III B.SC CLUSTER ELECTIVE – 3	**ANALYSIS OF APPLIED INDUSTRIAL PRODUCTS** **UNIT-I** • Will be able to know the composition of various soaps and oils. • Will be able to determine the various parameters of testing quality of soap and oils. **UNIT-II** • Will be able to know the composition of different types ofpaints. • Can be able to analyse the quality of various paints and industrial solvents. **UNIT-III** • Can be able to determine the composition of various fertilisers and pesticides. • Can be able to check the quality of fertilisers and pesticides. **UNIT-IV** • Will be able to know the quality of fuels like petrol and diesel through their octane number and cetane number. • Can be able to know the percentage of various gaseous fuels in their mixture and the quality of coal. **UNIT-V** • To get the knowledge of testing the quality of cement.

	• Can able to know the composition and quality of glass

TELUGU COURSE OUTCOMES

SEM -I "POETRY AND GRAMMAR"

Course Outcomes

CO1: Describe Language and Literature of Telugu various genres of Telugu literature. (K2)

CO2: Develop patriotism among the students to become a responsible citizens. (K3)

CO3: Distinguish between ancient and modern Telugu poetry and understand basic grammar aspects. (K4)

CO4: Produce moral values through teaching Telugu poetry and other vachana sahityam like kadhanika. (K3)

CO5: Develop functional communication skills in mother tongue. (K3)

SEM – II "POETRY, Kadhanka and novel kadhan"

Course Outcomes:

CO1: Illustrate language and literature of Telugu various genres of Telugu Literature. (K3)

CO2: Develop moral values and develop social responsibility about nature. (K3)

CO3: Develop social values and having knowledge about feminism. (K3)

CO4: Describe the struggle of human's to live in the society and have knowledge on vocabulary. (K2)

SEM – III "POETRY, PROSE PROSODY & FIGURE OF SPEECH"

Course Outcomes:

CO1: Illustrate language and literature of Telugu various genres of Telugu literature. (K3)

CO2: Produce human values to eradicate social evils like untouchability and poverty. (K3)

CO3: Describe the importance of mother tongue and personality development. (K2)

CO4: Demonstrate how prosody and figure of speech create interest among students through the rhythm and also poetry represents alpaksharamulalo – analpardha rachana. (K3)

SEM – IV "LEADERSHIP EDUCATION" (Soft Skills)

Course Outcomes:

CO1: Describe the role of management in organizations and explain how leadership qualities are developed. (K2)(K3)

CO2: To have knowledge on attitude formation, how to motivate the subordinate and develop the personality.

CO3: Demonstrate the importance of communication to maintain an institution or an organization. (K3)

CO4: Demonstrate the importance of team building and sharing of activities among teams for leading the firm successfully. (K3)

DEPARTMENT OF MATHEMATICS (UG)
COURSE OUTCOMES
DIFFERENTIAL EQUATIONS

Course Outcomes: Upon completion of the course students will be able to

CO1: Analyze real world scenarios to recognize when ordinary differential equations(ODEs) or system of ODEs are appropriate, formulate problems about the scenarios, creatively model these scenarios (using technology, if appropriate) in order to solve the problems using multi approaches, judge if the results are reasonable and then interpret and clearly communicate the results. (K4)

CO2: Construct ODEs and system of ODEs concepts that are encountered in the real world, understand and be able to communicate the underlying mathematics involved to help another person gain insight into the situation. (K3)

CO3: Apply ODEs and systems of ODEs in various situations and use correct mathematical terminology, notation and symbolic process in order to engage in work, study and conversation on topics involving ODEs and system of ODEs with colleagues in the field of Mathematics, Science or Engineering. (K3)

SOLID GEOMETRY

Course Outcomes: Upon completion of the course students will be able to

CO1: Determine geometrical terminology for angles, triangles, quadrilaterals and circles. (K3)

CO2: Calculate angles using a protractor. (K3)

CO3: Apply geometrical results to determine unknown angles. (K4)

CO4: Calculate line and rotational symmetries. (K3)

CO5: Calculate the areas of triangles quadrilaterals and circles and shapes based on these. (K3)

ABSTRACT ALGEBRA

Course Outcomes: Upon completion of the course students will be able to

CO1: Assess properties implied by the definitions of groups and rings. (K5)

CO2: Classify various canonical types of groups(including cyclic groups and groups of permutations).(K4)

CO3: Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups. (K4)

CO4: Analyze and demonstrate examples of ideals and quotient rings. (K4)

CO5: Apply the concepts of isomorphism and homomorphism for groups and rings. (K3)

CO6: Compare rigorous proofs of propositions arising in the context of abstract algebra. (K3)

REAL ANALYSIS

Course Outcomes: Upon completion of the course students will be able to

CO1: Describe the real line as a complete, ordered field. (K2)

CO2: Determine the basic topological properties of subsets of the real numbers. (K3)

CO3: Apply the definitions of convergence to sequences, series and functions.(K3)

CO4: Determine the continuity, differentiability and integrability of functions defined on subsets of the real line. (K3)

CO5: Apply the Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis. (K3)

CO6: Produce rigorous proofs of results that arise in the context of real analysis. (K3)

RING THEORY & VECTOR CALCULUS

Course Outcomes: Upon completion of the course students will be able to

CO1: Assess properties implied by the definitions of rings. (K5)

CO2: Analyze and demonstrate examples of ideals and quotient rings.(K4)

CO3: Discuss the various integral domain in ring. (K2)
CO4: Compute the concepts of isomorphism and homomorphism for rings. (K3)
CO5: Compute rigorous proofs of propositions arising in the context of rings. (K3)
CO6: Discuss the Scalar and vector valued functions of 2 and 3 variables and surfaces, and in turn the geometry of surfaces. (K2)
CO7: Calculate gradient vector fields and constructing potentials. (K3)
CO8: Calculate integral curves of vector fields and solving differential equations to find such curves. (K3)
CO9: The differential ideas of divergence, curl, and the Laplacian along with their physical interpretations, using differential forms or tensors to represent derivative operations. (K3)
CO10: Apply the integral ideas of the functions defined including line, surface and volume integrals – both derivation and calculation in rectangular, cylindrical and spherical coordinate systems. (K3)

LINEAR ALGEBRA

Course Outcomes: Upon completion of the course students will be able to
CO1: Solve systems of linear equations. (K3)
CO2: Analyze vectors in R^n geometrically and algebraically. (K4)
CO3: Apply the concepts of the terms span, linear independence, basis and dimension to various vector spaces and subspaces.
CO4: Apply matrix algebra and the related matrices to linear transformations. (K3)
CO5: Compute the use eigen vectors and eigen values. (K3)
CO6: Determine and use orthogonality. (K3)

NUMERICAL ANALYSIS (ELECTIVE)

Course Outcomes: Upon completion of the course students will be able to
CO1: Apply numerical methods for approximating the solution of problems of continuous mathematics. (K3)
CO2: Analyze the error incumbent in any such numerical approximation. (K4)
CO3: Apply a variety of numerical algorithms using appropriate technology. (K3)
CO4: Compare the viability of different approaches to the numerical solution of problems arising in roots of solution of non-linear equations, interpolation and approximation, numerical differentiation and integration, solution of linear systems. (K4)

ADVANCED NUMERICAL ANALYSIS - 8A (CLUSTER ELECTIVE)

Course Outcomes: Upon completion of the course students will be able to
CO1: Apply basic numerical methods and the theory behind them, related to numerical differentiation, numerical integration and solving.
CO2: Apply Least Squares Method to curve fit data using several types of curves (straight line, second degree parabola, power curve, exponential curve).(K3)
CO3: Solve the selected class of differential equations using Taylor, Picards, Euler's, Runge Kutta, Adams and Milne's. (K3)

SPECIAL FUNCTIONS - 8B (CLUSTER ELECTIVE)

Course Outcomes: Upon completion of the course students will be able to
CO1: Apply integral calculus and special functions of various problem and to know the application of some basic mathematical methods via all these special functions.
CO2: Classify and explain the functions of different types of differential equations. (K2)
CO3: Interpret purpose and functions of the gamma and beta functions.(K2)
CO4: Apply the gamma function, beta function and special functions to evaluate different types of integral calculus problems. (K3)

PROJECT WORK

Outcome:

Design and develop projects in Mathematics to inspire the students to study the fascinating areas of mathematics with the deep understanding. Further it provides knowledge to the students in analyzing mathematical solutions to certain problems. (K6)

Department of Statistics

Program Specific Outcomes

1. Understanding the nature and scope of the subjects and basic concepts and terminology of three courses of the program.
2. Analysis, compare and Construct the concepts in all three courses and to draw conclusions effective manner.
3. Analytical skills, mathematical modeling, data computation using statistical tools and computer programming knowledge is required.
4. Applications of mathematics, Statistics and Computers are necessary to draw conclusions for a given problem through MS Excel and other software‟s.
5. To develop Research thinking in students to collecting the data and solving practical science problems.

DEPARTMENT OF ELECTRONICS
SRI Y N COLLEGE (AUTONOMOUS)

Thrice Accredited by NAAC at „A" Grade
Recognized by UGC as "College with Potential for Excellence"
Narsapur-534275, AP, India

Program Learning Outcomes of B. Sc. Electronics

The following program outcomes have been identified for B. Sc. Electronics -

PLO1	Ability to apply knowledge of mathematics & science in solving electronics related problems
PLO2	Ability to design and conduct electronics experiments, as well as to analyze and interpret data
PLO3	Ability to design and manage electronic systems or processes that conforms to a given specification within ethical and economic constraints
PLO4	Ability to identify, formulate, solve and analyze the problems in various disciplines of electronics.
PLO5	Ability to function as a member of a multidisciplinary team with sense of ethics, integrity and social responsibility
PLO6	Ability to communicate effectively in term of oral and written communication skills
PLO7	Recognize the need for, and be able to engage in lifelong learning.

PLO8	Ability to use techniques, skills and modern technological/scientific/engineering software/tools for professional practices

B.Sc. Electronics Course Objectives and Course Outcomes

Semester-I			
Course Code	**Course Name**	**Course Objectives**	**Course Outcomes**
ELPI	**Basic Circuit Theory**	**Students will try to learn:** **1.** To explain the basic concepts and laws of DC and AC electrical networks and solve them using mesh and nodal analysis techniques. **2.** To introduce students with the fundamental concepts in graph theory. **3.** To analyze circuits in time and frequency domain. **4.** To explain concepts of driving point and transfer functions, poles and zeroes of network functions and their stability. **5.** To introduce open circuit, short circuit, transmission, hybrid parameters and their interrelationship. To synthesize the network using passive elements.	**After successful completion of the course student will be able to** **1.** Apply concepts of electric network topology, nodes, branches, loops to solve circuit problems including the use of computer simulation. **2.** Understand the basic concepts of graph and analyze the basic electrical circuits using graph theory. **3.** Apply time and frequency concepts of analysis. **4.** Understand various functions of network and also the stability of network. **5.** Learn the various parameters and their interrelationship, able to solve numericals with series, cascade, parallel connection using two port parameters.Synthesize the network using passive elements.

Semester-II			
Course Code	**Course Name**	**Course Objectives**	**Course Outcomes**

ELPII	**Electronic Devices & Circuits**	**Students will try to learn:** **1.** To understand operation of semiconductor devices. **2.** To understand DC analysis and AC models of semiconductor devices. **3.** To apply concepts for the design of Regulators and Amplifiers **4.** To verify the theoretical concepts through laboratory and simulation experiments. **5.** To understand the operation of the various bias circuits of MOSFET and Analyze and design MOSFET bias circuits.	**After successful completion of the course student will be able to** **1.** Understand the current voltage characteristics of semiconductor devices, **2.** Analyze dc circuits and relate ac models of semiconductor devices with their physical Operation, **3.** Design and analyze of electronic circuits, **4.** Evaluate frequency response to understand behavior of Electronics circuits. **5.** Design and analyze the basic operations of MOSFET.

Semester-III			
Course Code	**Course Name**	**Course Objectives**	**Course Outcomes**
ELPIII	**Analog Electronics & Digital Principles**	**Students will try to learn:** **1.** To understand the operation and design of multistage amplifier for a given specification. **2.** To understand the operation and design oftransformer coupled various types of power amplifier circuits. 3. To understand the effects of negative feedback on amplifier circuits. **4.** To understand the concepts, working principles and key applications of linear integrated circuits. **5.** To perform analysis of circuits based on linear integrated circuits. **6.** To design circuitsand systems for particular applications using linear integrated circuits.	**After successful completion of the course student will be able to** **1.** Know about different power amplifier circuits, their design and use in electronics and communication circuits. **2.** Know the concept of feedback amplifier and their characteristics. **3.** Design the different oscillator circuits for various frequencies **4** Understand the fundamentals and areas of applications for the integrated circuits. **5** Analyze important types of integrated circuits. 3. Demonstrate the ability to design practical circuits that perform the desired operations. **6** Understand the differences between theoretical, practical & simulated results in integrated circuits.

Semester-IV			
Course Code	**Course Name**	**Course Objectives**	**Course Outcomes**
ELPIV	**Digital Electronics & Digital IC Applications**	**Students will try to learn:** 1. To understand number representation and conversion between different representation in digital electronic circuits. 2. To analyze logic processes and implement logical operations using combinational logic circuits. 3. To understand characteristics of memory and their classification. 4. To understand concepts of sequential circuits and to analyze sequential systems in terms of state machines	**After successful completion of the course student will be able to** **1.** Develop a digital logic and apply it to solve real life problems. **2.** Analyze, design and implement combinational logic circuits. **3.** Classify different semiconductor memories. **4.** Analyze, design and implement sequential logic circuits.

Semester-V(P-V)			
Course Code	**Course Name**	**Course Objectives**	**Course Outcomes**
ELPV	**Microprocessors Programming & Applications**	**Students will try to learn:** 1. To develop background knowledge and core expertise Of Microprocessor. 2. To know the importance of different peripheral devices and theirinterfacing to Microprocessors. 3. To know the design aspects of Microprocessor. 4. To write assembly language p	**After successful completion of the course student will be able to** 1. Draw and describe architecture of 8085 and 8086 Microprocessors. 2. Interface various peripheral devices to the Microprocessors. 3 Write assembly language program for Microprocessors. 4. Design Microprocessor based system for various applications.

Semester-V(P-VI)

Course Code	Course Name	Course Objectives	Course Outcomes
ELPVI	**Electronic Communication Systems**	**Students will try to learn:** **1.** The fundamentals of basic communication system, types of noise affecting communication system and noise parameters. **2.** Need of modulation, modulation processes and different amplitude modulation schemes **3.** Different angle modulation schemes with differentgeneration and detection methods. **4.** Various radio receivers with their parameters. **5.** Need of sampling and different sampling techniques. Generation and detection of **6.** To study the concept of Mobile radio propagation, cellular system design. **7.** To understand mobile technologies like GSM , CDMA **8.** To know the mobile communication evolution of 2G, 3G and 4G in detail.	**After successful completion of the course student will be able to** **1.** Understand different blocks in communication system and how noise affects communication using different parameters. **2.** Distinguish between different amplitude modulation schemes with their advantages, disadvantages and applications.. **3.** Analyze generation and detection of FM signal and comparison between amplitude and angle modulation schemes. **4.** Identify different radio receiver circuits and role of AGC. **5.** Know modern multiple access schemes, the concept of frequency reuse, channel assignment strategies and estimate trucking and GOS. **6.** Understand GSM, CDMA concepts, architecture, frame structure, system capacity & Services

Semester-VI (P-VII)

Course Code	Course Name	Course Objectives	Course Outcomes
ELPVII	**Microcontrollers & Interfacing**	**Students will try to learn:** **1.** To develop background knowledge and core expertise Of Microcontroller. **2.** To know the importance of different peripheral devices and their interfacing to Microcontrollers. **3.** To know the design aspects of Microprocessor **4.** To write assembly language programs of Microcontroller for various applications.	**After successful completion of the course student will be able to** **1.** Draw and describe architecture of 8051 Microcontroller **2.** Interface various peripheral devices to the Microcontrollers. **3** Write assembly language program for Microcontrollers. **4.** Design Microcontroller

		based system for various applications.

Semester-VI (P-VIIICE1)			
Course Code	**Course Name**	**Course Objectives**	**Course Outcomes**
ELPVIIICE1	**Embedded Systems Design**	**Students will try to learn:** **1.** The concepts and architecture of embedded systems **2.** Basics of AVR ATmega32 Microcontroller. **3.** The concepts of DSP Based Embedded Systems **4.** The concepts of Embedded Systems in Robotics **5.** Different design platforms used for an embedded systems application	**After successful completion of the course student will be able to** **1.** Understand embedded system concepts and architecture of embedded systems **2.** Understand the architecture of AVR ATmega 32 microcontroller and write embedded program for ATmega32 microcontroller. **3.** Demonstrate the open source RTOS and solve the design issues for the same. **4.** Select elements for an embedded systems tool. **5.** Understand the use Embedded Systems in Robotics

Semester-VI (P-VIIICE2)

Course Code	Course Name	Course Objectives	Course Outcomes
ELPV III CE2	Consumer Electronics	**Students will try to learn:** **1.** To sketch and describe operating principles of different types of microphones. **2.** To learn various components of composite video signal and differentiate between hue, brightness, saturation, luminance and chrominance. **3.** To acquaint with various devices related to telecommunication system. **4.** To describe working of Washing machine, Digital Camera system, Microwave ovens with sketches of block diagram. **5.** To understand the working principles of various consumer electronic devices.	**After successful completion of the course student will be able to** **1.** List technical specification of electronics Audio system (microphone and speaker). **2.** Trouble shoots consumer electronics products like TV, washing machine and AC. **3.** Identify and explain working of various colour TV transmission blocks. **4.** 4. Understand various functions of Cam coder and shoot a video and take snapshots and save them in appropriate format. **5.** Understand the basic functions of various consumer electronic goods.

Semester-VI (P-VIIICE3)			
Course Code	**Course Name**	**Course Objectives**	**Course Outcomes**
ELP VIII CE3	**Power Electronics**	**Students will try to learn:** **1.** To equip the students with the basic knowledge of Power semiconductor Devices **2.** To study the controlled Rectifiers, Inverters and DC to DC converters . **3.** To Understand the working AC and DC Drives. **4.** To Study the application of Power Electronics.	**After successful completion of the course student will be able to** **1.** Understand the working of Power Electronics Devices. **2.** Understand working of Controlled Rectifiers ,Inverters and DC to DC converters. **3.** Understand the Working of AC/DC Drives

DEPARTMENT OF GEOGRAPHY

PROGRAMME OUTCOMES

1. Understand the physical and political boundaries of dynasties from ancient period to modern times.
2. To analyse the influence of Indian location and geographical features such as Himalayas and oceans, plains attract the foreign invaders for political and commercial establishments.
3. To examine the relationship between the administration and historical legacy.
4. To provide skills required for gainful employment by using knowledge of geography, history and economics such as Surveyors, Map analyst, Tourist guides and economy analysts.
5. Tourism display an understanding of the production, implementation, and impacts of tourism development locally, nationally, and internationally.
6. Demonstrate cultural and environmental sensitivity through an appreciation for various forms of diversity in our worlds.
7. Write clearly and concisely in the conventions of tourism studies.
8. Possess skills and experience relating to the management and production of tourism in a professional setting.
9. Plan, lead, organize and control resources for effective and efficient tourism operations.

DEPARTMENT OF GEOGRAPHY

COURSE OUTCOMES

1. Indian Geography is concerned with the knowledge of Physical features, climate, Soils, Natural vegetation, Resources and economical features of India.
2. To know the origin and location of industries, transport system, major exports and imports and international trade in their study.
3. It studies the surface features of the earth and various landforms, interior of the earth, movement of plate tectonic, continental drift, earth quakes, volcanoes and various types of rocks and weathering.
4. It is used to identify the various landforms associated with stream, glacial, wind, ocean and underground actions.
5. To know the structure and composition of atmosphere, insolation, pressure distribution, different types of winds and climatic classification.
6. To acquire the knowledge of ocean floor, salinity, surface temperature, tides and waves, ocean currents and ocean resources.
7. It is the study of human activities and to develop in interdisplinary perspective analysis of global environment and resources.
8. To identified the different types of races tribes, pollution and global warming.
9. It is the study of economic activities, various methods of agricultural methods, livestock, mineral and energy resources and industrial location theory of weber.
10. To identify the various industries, transport system and trade of the world.
11. It allows mapping of geographical characteristics of regions without physical contact with the areas being explored.
12. It is used to study the energy interactions with earth surface materials, analyse the raw data of various band combination of different paths of satellite data.
13. To know the knowledge on GIS applications how to manipulate, retrieve, storage and analysis the raw data.
14. To know the different types of vector and raster image data and how to generate the different models and using in various applications.
15. To know about the knowledge of Physical features, climate, soil and drainage system of Asian region.
16. It is used to identify the various industries, mineral wealth and population distribution in Asia.
17. To know about the knowledge of relief features, climate, vegetation, mineral wealth and distribution of industries of South East Asia.
18. To know the knowledge of Physiographic divisions of Thailand, Indonesia and Malaysia.
19. To know about the knowledge of relief features, climate, vegetation and distribution of Population growth of South West Asia.
20. To know the knowledge of Oil resources and mineral wealth in South West Asia.

DEPARTMENT OF GEOGRAPHY

PROGRAMME SPECIFIC OUTCOMES

Upon completion of the BA in Geography programs, majors will be able to:

1. Graduates will be able to explain physical processes and their spatial distribution on the Earth‟s surface, including landforms, climate, soils, vegetation, and hydrology.
2. Graduates will be able to distinguish and classify human characteristics, human activities and processes, and interpret their spatial distribution on the Earth‟s surface including the composition of population, cultural complexes, economic interdependence, settlement and political patterns.
3. Graduates will identify and critically analyze patterns of human-environment interactions, including perception, distribution and use of natural resources.
4. Graduates will recognize and explain the critical importance of location, proximity, and pattern in cause and effect relationships and be able to critically analyze those relationships through geospatial techniques.
5. Graduates will design maps to analyze and interpret patterns of physical and human characteristics on the Earth‟s surface and apply geospatial tools to appraise real-world problems.
6. Graduates will be able to explain principles and tools of geographic information science including cartography, remote sensing, and geographic information systems.
7. Graduates will be able to explain principles and tools of geographic information science including cartography, remote sensing, and geographic information systems.
8. Graduates will be able to synthesize, critically evaluate and present geographic information that addresses human-environmental problems in written and oral form.
9. Articulate the theories, philosophies, and concepts in the discipline of geography, including unifying themes of spatial patterns and structures, the interrelationship between people and places, and the interactions between nature and society.
10. Identify and assess how geographic concepts apply in the workplace and in everyday life to solve real-world problems.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
PROGRAM OBJECTIVES AND OUTCOMES

I. ALL DEGREE COURSES

PROGRAM OBJECTIVES:

1. Provide students with the critical faculties necessary in an academic environment on the job and in an increasingly complex interdependent world.
2. Assist students in the development of intellectual flexibility, creativity and cultural literacy so that they may engage in lifelong learning.

PROGRAM OUTCOMES:

1. Students should be able to apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres.
2. Students should be able to write analytically in variety of formats, including essays, articles, reflecting writing and critical review of secondary sources.
3. Students should be able to understand thoroughly the process of communicating and interpreting, humour experiences through literary presentation using contexts and methodologies.

II. SPECIAL ENGLISH

PROGRAM OBJECTIVES:

1. Ability to become great leaders, administrators and statement with good value systems,thinking skills and commitment to the cause.
2. Ability to combine the values of literature with the logic and critical thinking of Philosophy to perfect the lessons of History and evolve oneself into an ideal citizen and a useful asset to the community.
3. A systematic or coherent understanding of the academic field of, English Literature and its different learning areas and applications, and its linkages with related disciplinary areas; Procedural knowledge that creates different types of professionals related to the disciplinary subject area of , including English Literature professionals engaged in research and development, teaching and government/public service; Skills in areas related to one‟s

specialization area within the disciplinary/subject area of English Literature and current and emerging developments in the field of English Literature.

4. The ability to use communication skills such as formulating and tackling related problem English Literature s and identifying and applying appropriate literary principles and methodologies to solve a wide range of problems associated with English Literature. Recognize the importance of digital literacy and computing, and the role of computers and other electronic gadgets in understanding the literary world.

PROGRAM OUTCOMES:

1. Students get PG seats and succeed in various competitive examinations and in varieties of jobs using the knowledge of English and History.
2. Student succeed in administrative services like IAS and become useful leaders and public representatives.
3. Students master good communication skills,character and discipline imbibing the spirit of Literature,Philosophy and History.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
COURSE OBJECTIVES AND OUTCOMES
I Degree General English
SEMESTER- I

OBJECTIVES:

1. Ability to read and comprehend literary pieces.
2. To improve vocabulary and learn grammar also.
3. To use appropriate words and structures required for a situation.
4. To write meaningfully on topics.
5. To use receptive skills through reading and listening to acquire good exposure of language and literature.
6. To enhance students to develop style in speaking and writing and manipulate the tools of language for effective communication.
7. To make the students to read and understand any text in English while listening to the inputs given by the teacher in the classroom.
8. To enrich the students to imbibe the rules of language unconsciously and tune to deduce language structure and usage.
9. To encourage the students to write paragraphs, essays and letters.
10. Students decipher the mechanism of language and use it for success in competitive examinations and job related speaking and writing tasks.

OUT COMES:

CO 1: Students will learn the various resources of knowledge that Abdul Kalam points out and how the world has changed during the last century.

CO 2: Students should know the importance of mother tongue and the role of English or any other foreign language in our lives.
CO 3: Students will improve decision making skills and thinking ability to convey their ideas without any confusion.
CO 4: Students will realize the unconditional and unflinching love of mother towards her children and also learn the Indianessandsuperstitions.
CO 5: In spite of all their desires, they should learn the importance of parents.
CO 6: The students will be enlightened to regain hope and howto overcome the critical situations in life.
CO 7: Ability to learn dialogue delivery through developing reading skills and to know the moral of the drama i.e., the value of true friendship and love.
CO 8: They can improve pronunciation, speaking and writing skills with simple discussion and explanation of important grammatical items to enable the students to use language accurately and appropriately.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
COURSE OBJECTIVES AND OUTCOMES
I Degree General English
SEMESTER- II

OBJECTIVES:

1. Abilityto read and comprehend literary pieces.
2. To improve vocabulary and learn grammar also.
3. To use appropriate words and structures required for a situation.
4. To write meaningfully on topics.
5. To use receptive skills through reading and listening to acquire good exposure of language and literature.
6. To enhance students to develop style in speaking and writing and manipulate the tools of language for effective communication.
7. To make the students to read and understand any text in English while listening to the inputs given by the teacher in the classroom.
8. To enrich the students to imbibe the rules of language unconsciously and tune to deduce language structure and usage.
9. To encourage the students to write paragraphs, essays and letters.

10. Students decipher the mechanism of language and use it for success in competitive examinations and job related speaking and writing tasks.

OUTCOMES:

CO 1: Students know the differences between technology and Indian superstitions.
CO 2: Students learn the custom of greetings of different cultures and how the practice of shaking hands ingrained in the blood of the Westerner.
CO 3: Students develop their aesthetic skills and sense the sights, music and serenity of the Autumn Season.
CO 4: Students will understand the male chauvinism ina patriarchal society.
CO 5: Students should understand how the greedy people face the tragic end.
CO 6: Students should know how rumours and lack of communication can cause many problems and be destructive.
CO 7: Ability to learn dialogue delivery, reading skills and the system of marriage with economic security takes precedence over romance and love in Russian society.
CO 8: They improve pronunciation skills, speaking and writing skills with simple explanation of important grammatical items to enable the student to use language accurately and appropriately.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
COURSE OBJECTIVES AND OUTCOMES
I Degree General English
SEMESTER- III

OBJECTIVES:

1. Ability to read and comprehend literary pieces.
2. To improve vocabulary and learn grammar also.
3. To use appropriate words and structures required for a situation.
4. To write meaningfully on topics.
5. To use receptive skills through reading and listening to acquire good exposure of language and literature.
6. To enhance students to develop style in speaking and writing and manipulate the tools of language for effective communication.
7. To make the students to read and understand any text in English while listening to the inputs given by the teacher in the classroom.

8. To enrich the students to imbibe the rules of language unconsciously and tune to deduce language structure and usage.

9. To encourage the students to write paragraphs, essays and letters.

10. Students decipher the mechanism of language and use it for success in competitive examinations and job related speaking and writing tasks.

OUTCOMES:

CO 1: Students will be able to overcome shyness and learn how shyness help them to know the discernment of truth and spiritual discipline.
CO 2: Etiquette and manners are very important for a person to live in the society. Students will learn to be polite and courteous to others.
CO 3:Students will understand the change of lifestyle, values, morals and the total change in the world. And also they will learn how to be innocent, faithful and sincere with others.
CO 4: Students should learn the importance of respect and hard work, coupled with family tradition.
CO 5:Students will learn mother/daughter relationship on different stages and aspects of life.
CO 6:Students will be able to understand the issues of human perception.
CO 7: Students will get awareness on the evils of child marriage and the prevailing practice of bride price and also widow remarriage.

CO 8:Good Study skills, Just a Minute talks and Writing skills can increase Students" confidence, competence and self-esteem.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
COURSE OBJECTIVES AND OUTCOMES
Special English

OBJECTIVES:

1. Have an ability to write within the context of different genres.
2. Have acquired pedagogical skills required for teaching in English.
3. Have an understanding of a variety of media and literary genres.
4. Be able to apply critical theories in the interpretation of literary texts.
5. To train graduates in writing and reporting techniques in teaching field and business field.
6. To prepare students for a post of highly sought after and remunerating carrier like teaching, translating, editing and content development that requires clarity of thinking and written aswell as spoken expression.

OUTCOMES:

(History of English Literature)

After completion of the course students will able to

1. Know the process of beginning and growth of English Language.
2. Know about various innovative ways of using English Language verbal and non-verbal communication.
3. Write clearly effectively and creatively and adjust writing style appropriately to the context, the context and the nature of the subject.
4. To think about the relation between language and literature.

(British and American Literature)

1. Trace the developmental history of English Literature from Old English period to 19th Century.
2. Learn various interpretative techniques to approach literary texts of varied genres.
3. Show familiarity with major literary works by British, American and Indian writers in the field of Prose, Poetry, Drama and Novel.

(Literary Theory)

After completion of this course students will be able to

1. Learn the history of Literary Criticism and various literary theories.
2. Developing a skill in applying various literary theories in interpreting a specific text.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
PROGRAM SPECIFIC OUTCOMES

I. ALL DEGREE COURSES:

1. **PSO1:** Students are expected to be able to communicate effectively in written, oral and Graphical Form about specific issues and to formulate well organized written arguments that state assumptions and hypothesis supported by evidence

2. **PSO 2:**To develop Problem Solving skills among students

3. **PSO 3:** To develop Critical Thinking skills among students

4. **PSO 4:** To develop Realization of human values

5. **PSO 5:** To develop Responsible and dutiful citizen

II. SPECIAL ENGLISH:

1. **PSO 1:** Literature Courses in the department of English offers the opportunity to study influenza writings from the British, American and Global Anglophone traditions. Forces may focus on a historical period, an issue or theme, a critical approach or a literary genre

2. **PSO 2:**Literature provides imaginative and critical insights into all areas of human experience, nature and culture, love and sexuality

3. **PSO 3:** Equip students with knowledge of English as a world language

4. **PSO 4:** Train students for carrier and advanced studies in a wide range of English public relations/communication fields

PSO 5: Developing a sense of experience among students.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
COURSE OBJECTIVES AND OUTCOMES
I Degree
Foundation Course in Communication Skills-I

OBJECTIVES:

1. Ability to trace the difference of pronunciation of words, their correct pronunciation, accent and intonation.
2. Ability to use English correctly in speaking and writing skills.
3. To develop employability skills.
4. To focus on Communication Skills and Language Skills (LSRW).

OUTCOMES:

CO1: Vocabulary Building: English is a live and ever growing language. Students will enrich their Vocabulary. By using good vocabulary, Add some more to their English Language.

CO2: Students must learn Different types of Verbs because a verb is one of the main hearts of a sentence or a question in English.

CO3: Students must learn different categories and rules and meanings of Modals.

CO4: Listening is an essential and important skill in all the spheres of life. Listening is very important because it prevents miscommunication. By good listening students will become influential speakers.

CO5: Now a days Reading is fundamental function. It is a vital skill (in finding a good job and in qualifying in competitive examinations). It is very important because it develops the mind by reading students can improve their knowledge.

SRI Y.N COLLEGE (Autonomous), NARSAPUR
DEPARTMENT OF ENGLISH
COURSE OBJECTIVES AND OUTCOMES
Foundation Course in Communication Skills-II

OBJECTIVES:

1. Ability to trace the difference of pronunciation of words, their correct pronunciation, accent and intonation.
2. Pronunciation is the key to know how sounds are articulated.
3. All messages are designed to a purpose whether written or spoken. Effectivecommunication skills will enable to create clear messages.

4. To speak fluently and confidently participate in group and class discussions andacademic debates.
5. Hold seminars and deliver effective oral presentations on different topics.
6. The learners to use English not only in the classroom but also in their daily interaction with their classmates, friends, teachers or any other English speaking people.
7. To develop employability skills.

OUTCOMES:

CO1: Students will identify and produce English key sounds.

CO2: Student will be able to produce basic rhythm, stress and intonation patterns in correct contexts.

CO3: Students will become experts while developing good communication skills surely they will success in their interviews. Presentation skills are also very important while students participating in group discussions and Public Speaking.

CO 4: Students perform various speaking and writing tasks, such as role-plays, debates, group discussions apart from the use of correct spelling, punctuation and the ability to transfer information in the writing tasks.

CO5: They develop the skill of transfer information in the text in

I Year B.A. Semester - I

Ancient Indian History & Culture

Content I: Survey of Sources

Course Objective

- To inculcate awareness and making student to understand the main sources of Ancient Age Cultures& Civilizations of Circa 3,50,000 BC to 1,500 BC.

B. Course Outcome

- Students will able to understand the origin, extent and significance of Influence of Geography on History.

Content II: Vedic Age & Religious Reform Movements

A. Course Objective

- The objective of this course is to introduce students to the importance of Vedic Age and different religious traditions of Buddism and Jainism. The development of iconographic depictions in each of these traditions is also outlined.

B. Course Outcome

- Students learn about the ancient Polity, Economy & Culture of Society and exposure of Religious Reform Movements .

Content III: Transition from Territorial States to Emergence of Empires

A. Course Objective

- The objective of this course is to provide an overview of the major developments in Prehistory of Territorial States to Emergence of Empires.

B. Course Outcome

- To make the students understand the functioning of Imperial Administration and Rise and downfall of Empires (Cirsa 600 to 300 BC)

Content IV: Conditions during 200 BC to 300 AD

A. Course Objective

- **Students need exposure in understanding Central Asian Contacts and also the age of Satavahanas &Sangam age.**

B. Course Outcome

- It develops analytical skills the role of Administrations, about societies, language & literature during 200BC to 300 A.D

Content V: India between 300 AD & 600 AD

A. Course Objective

- The objective of this paper is to acquaint the students with the political developments in India from the Gupthas period. It will also discuss on society, economy and religious traditions of that time.

B. Course Outcome

- This will help the students to learn the existence of India between 300 AD &600AD

I Year B.A. Semester - I

Early Medieval Indian History & Culture: (600 AD to 1526 AD)

Content I: Harsha & His Times

A. Course Objective:

- Understand the Polity, Society, Economy and Culture from 7th to 11th century.

B. Course Outcome

- Identifying the difference in running Administrations during Harsha regime and his contemporaries.

Content II: Age of later Pallavas during 7th, & 8th Centuries AD

A. Course Objective:

- Importance of Art & Architecture during 7th to 11th Century

B. Course Outcomes:

- Students gain a perspective on Cultural Development & Life from 9th to 12th Century.

Content III: Conditions in India on the eve of Turkish Invasions

A. Course Objective:

- To acquaint the students with the Invasions of Turks and Arabs and the political developments in India from the Sultanate. and Ghazni & Ghori .

B. Course Outcomes:

- Helps the students to understand how India struggled during Slave Dynasity

Content IV: Delhi Sultanate (1290 to 1526 AD)

A. Course Objective:

- The main objective of this content is to acquaint the students with the political developments in India from the Sultanate period . Administrative & Economic Reforms and also witnessed during Tughlaqs decline & Disintegration of Delhi & its impact even today.

B. Course Outcomes:

- It will also discuss on society, economy, Technology and religious traditions of that time.

Content V: Cultural Development in India between 13th & 15th Centuries AD

A. Course Objective:

- Time to educate the students the severe impact of Islam on Indian Society & Culture.

B. Course Outcomes:

- Need of the hour is the Emergence of Composite Culture.

II Year B.A. Semester - III

Late Medieval & Colonial History of India (1526 to 1857 AD)

Content I: India from 1526 to 1707 AD

A. Course Objective:

- The content intends to give a brief outline on the historiography of medieval India as well as the establishment and consolidation of the Mughal rule.

B. Course Outcomes:

- After completing this course students will have a familiarity with the political history of India from 1526 to 1707 AD of Late Medieval & Colonial History

Content II: Administration, Economy, Society---------- Mughals

A. Course Objective:

- The objective of this course is to introduce students a detail analytical outlook on the developments that have taken place in Administrations, Economy, Society and cultures.

B. Course Outcomes:

- Helps the students to understand the result of Disintegration of Mughal Empire.

Content III: India under Colonial Hegemony

A. Course Objective:

- To make students understand the history of European Settlements.

B. Course Outcomes:

- By the end of the course the pupil will be well equipped about British Empire in India upto 1857 AD

Content IV: Economic Policies of the British (1757b- 1857)

A. Course Objective:

- The Content intends to give a detailed account of Economic policies of British

B. Course Outcomes:

- Students completely understood the socio-economic history of Europe from 17th century to the impact of the industrial revolution on Indian Industry. It will also try to discuss the rise of modern science and mercantilist economy in Europe.

Content V: Anti- Colonial Upsurge

A. Course Objective:

- The main objective of this theme is to make student to understand the plight of Peasent & Tribal Revolts during 1857.

B. Course Outcomes:

- End of the course the students will have complete knowledge about Causes and Consequences of 1857 revolts.

II Year B.A. Semester - IV

Social Reform Movement & Freedom Struggle (1820 - 1947)

Content I: Social, Religious & Self Respect Movements

A. Course Objective:

- Today present student community need to understand the importance of contributions rendered by Philosophical Organizations in India in promoting Self Respect.

B. Course Outcomes:

- The students gain and learn ethics from studying the pathway created by great thinkers of Social & Cultural Awakening movements, Struggle of Women and against Caste is the need of the hour.

Content II: Growth of Nationalism in the 2nd Half of 19th Century

A. Course Objective:

- History Students need to understand Impact of British Colonial Rule & their policies on India

B. Course Outcomes:

- This will help the students gain complete knowledge on the hardship of Freedom Struggle & Sacrifices & Formation of Indian National Congress

Content III: Freedom Struggle from (1885 to 1920)

A. Course Objective:

- To make the pupils to understand in detail the Moderate Phase focus on Partition of Bengal & Emergence of Militant Nationalism.

B. Course Outcomes:

- The students will be benefitted by understanding Swadeshi and Boycott Movement resulting Home Rule Movement.

Content IV: Freedom Struggle from (1920 to 1947)

A. Course Objective:

- This content is very important to present historical contribution on Gandhiji his main Role in the National Movement.

B. Course Outcomes:

- By the end of this course the present generation will understood the hard work and sacrifice of great leaders Gandhiji & Subhas Chandra Bose.

Content V: Muslim League & the Growth of Communalism

A. Course Objective:

- The students must learn the role played by Muslim League & the Growth of Communalism resulting Partition of India

B. Course Outcomes:

- The student will understand significant contribution of Sardar Vallabai Patel to attainthe Integration of Princely States into Union Territories

III Year B.A. Semester - VI
Paper - VIII-A-I (Cluster Elective Paper - I)
Cultural Tourism in Andhra Pradesh

Content I: Concepts of Tourism

A. Course Objective:

- Understand the concept of cultural tourism

B. Course Outcomes:

- Know the Importance of tourism

Content II: Types of Tourism

A. Course Objective:

- Identify the significance of culture in tourism

B. Course Outcomes:

- Acquire Knowledge about The types of tourism

Content III: History and Tourism

A. Course Objective:

- Develop Basic Skills required for jobs in tourism industry

B. Course Outcomes:

- Learn and assess the Impact of Archaeological Survey

Content IV: Planning and Development of A.P. Tourism

A. Course Objective:

- Create awareness on planning and developments of monuments and sites

B. Course Outcomes:

- Know the planning and Development of A.P. Tourism

Content V:Modalities of Conducting Tourism

A. Course Objective:

- Get Knowledge About the historical and cultural events in India

B. Course Outcomes:

- Acquire Knowledge about the field work and Preparation of Project

III Year B.A. Semester - VI
Paper - VIII-A-2 (Cluster Elective Paper - 2)
Popular Movements in Andhra Desa(1848 to 1956 AD)
(History and Culture of Andhra from 1857 to 2014)

Content I: Social & Self Respect Movements

A. Course Objective:

- A detail understanding of the students about the contribution and literarymovements of great leaders and Writers in promoting Self Respect.

B. Course Outcomes:

- Understand and Evaluate the Effects of Social and Self Respect Movements In Andhra

Content II: Freedom Movement in Andhra (1885 - 1920)

A. Course Objective:

- To make the students to know the significant events of Freedom Movement in Andhra (1885 - 1920)

B. Course Outcomes:

- Know the Glorious Events of Vandemataram Movement in A.P

Content III: Freedom Movement in Andhra (1920 - 1947)

A. Course Objective:

- To make the students to know the significant events of Freedom Movement in Andhra (1920 - 1947)

B. Course Outcomes

- Acquire knowledge about Freedom Movement in A.P.

Content IV: Movement for Separate Andhra State (1953)

A. Course Objective:

- Movement for Separate Andhra State (1953)

B. Course Outcomes

- Analyse the problems of Movement for Separate Andhra State

Content V: Movement for Formation of Andhra Pradesh (1956)

A. Course Objective:

- Get knowledge about Movement for Formation of Andhra Pradesh

B. Course Outcomes

- Know the Martyrdom of Potti Sreeramulu In the Formation of Separate Andhra State

III Year B.A. Semester - VI
Paper - VIII-A-3 (Cluster Elective Paper - 3)
Contemporary History of Andhra Pradesh (1956 - 2014)

Content I:Socio-Economic Changes in Andhra Pradesh

A. Course Objective:

- Understand the geographical settings of A.P, distinguish and analysis of Joint A.P. Get knowledge about the Socio Economic conditions of AP

B. Course Outcomes:

- Acquire Knowledge about The Socio and Economic Changes In Andhra Pradesh

Content II: Growth of Leftist Ideology

A. Course Objective:

- Identify different movements in AP. Get knowledge on communist movements & Growth of Leftist Ideology in AP

B. Course Outcomes:

- Learn and Assess The Communist Activities in A.P.

Content III: Dalit Movement

A. Course Objective:

- Understand the importance of Dalit Movement and create awareness on untouchability, education, literature

B. Course Outcomes

- Know and Examine Dalit Movement and Impact of Untouchability

Content IV: Early Trends towards Bifurcation

A. Course Objective:

- Students learn to examine the political structure of AP and able to understand thebifurcation process of AP

B. Course Outcomes

- Understand the Early Trends Towards Bifurcation

Content V: Bifurcation of Andhra Pradesh

A. Course Objective:

- Students need and Create Awareness of Science and Technological Developments in AP after Bifurcation of united Andhra Pradesh.

B. Course Outcomes

- Know and Examine the Formation of Telangana State

III Year B.A. Semester - V

(Core Paper) Paper: V

Age of Rationalism and Humanism - The World between 15th & 18th Centuries

Content I: Feudalism

A. Course Objective:

- The objective of this content is to acquaint the students with the theories of the transition from feudalism to capitalism in the west.

B. Course Outcomes:

- The students will understood in detail Geographical discoveries - causes & consequences.

Content II: The Renaissance Movement

A. Course Objective:

- This course helps the students to understand The Renaissance Movement and transformation that took place from Medieval to Modern World.

B. Course Outcomes:

- Students completely understood spread of the movement and effects of Reformation.

Content III: Emergence of Nations States

A. Course Objective:

- From this content students able to understand Emergence of Nations States and its Impact.

B. Course Outcomes:

- End of course student understood the glorious revolutions (1688) resulting Origin of Parliament- Constitutional Settlement and the significance of Bill of Rights.

Content IV: Age of Revolutions

A. Course Objective:

- The students could able to understand Age of revolutions specifically The American Revolution.

B. Course Outcomes:

- This will help students to learn about opening of New World Causes and significance of 1791

Content V: Age of Revolutions

A. Course Objective:

- The students could able to understand Age of revolutions specifically The French Revolution.

B. Course Outcomes:

- This will help students to learn and understand the teachings of Philosophers

III Year B.A. Semester - V

(Core Paper) Paper: VI

History & Culture of Andhra Desa (From 12th to 19th Century AD)

Content I: Andhra during 12th & 13th Centuries AD

A. Course Objective:

- To make the students understand ancient history of Andhra during 12th & 13th Centuries AD

B. Course Outcomes:

- Understand the political administration, economic & social life, cultural, intellectual and in the past and their relation to the historical context of the period under study during Kakatiyas &the age of Reddy Kingdoms.

Content II: Andhra during 14th & 15th Centuries AD

A. Course Objective:

- To make the students understand the Polity, Administration, Society& Economy during Vijayanagara Empire and about Sri Krishna Devaraya , his contributions to Andhra Culture

B. Course Outcomes:

- In the end they understood development , decline & downfall of Literature & Architecture.

Content III: Andhra during 16th & 17th Centuries AD

A. Course Objective:

- Significance of this unit is to give acomplete analysis on Evolution of Composite Culture main focus on The Qutbshahis of Golkonda.

B. Course Outcomes:

- This analysis will help students to know about Origin & Decline of Administration,Society& Economy, Literature & Architecture.

Content IV: The 18th & 19th Centuries AD of Andhra

A. Course Objective:

- The students to be able to understand East India Company's Authority over Andhra.

B. Course Outcomes:

- End of the course students learned the severe impact of three Carnatic Wars occupation of districts which lead to peasants and tribal revolts.

Content V: The 18th & 19th Centuries AD of Andhra

A. Course Objective:

- To develop awareness of past events during East India Company's Authority its impact on Andhra Administration'

B. Course Outcomes:

- Students gained complete reality on impact of Industrial Revolution on Economy and special contributions of Sir. Thomas Munroe, C.P. Brown & Sir Arthur Cotton.

III Year B.A. Semester - VI

(Elective Paper) Paper: VII(A)

History of Modern Europe (From 19th Century to 1945 AD)

Content I:Industrial Revolution: Origin, Nature and Impact

A. Course Objective:

- This content on the Industrial Revolution allows you to help students make connections between the first inventions of the 19th century and the great social changes that affected slavery and imperialism.

B. Course Outcomes:

- Students understood that With the birth of the Industrial Revolution, formerly rural areas quickly became urbanized lives of industry.

Content II: Unification Movements in Italy & Germany and their impact

A. Course Objective:

- A detail exposure is needed for student to know the difference between Unification Movements in Italy & Germany and their impact on World Economy. **B. Course Outcomes:**
- In this content students understood series of political events that has taken place during Unification Movements

Content III: Communist Revolution in Russia - Causes, Course and Results - Impact on World order

A. Course Objective:

- Students can understand the theoretical analysis of Communist Revolution in Russia - Causes and results

B. Course Outcomes:

- At the end of the course they realised the severe Russian Communist Revolution its Impact on World order

Content IV: World War I: Age of Rivalry in Europe between 1870 and 1914 - Results of the War - Paris Peace Conference - League of Nations.

A. Course Objective:

- The First World War, Khilafat and Non - Cooperation student able to Recognize the characteristics of Indian nationalism through a case study of Non-Cooperation and Civil Disobedience Movement. Analyze the nature of the diverse, social movements of the time.

B. Course Outcomes:

- Student learn and develop patriotism and understood Indian belongingness

Content V: World War II: Causes, Fascism & Nazism - Results: The United Nations Organization: Structure, Functions and Challenges

A. Course Objective:

- Students can understand the theory of colonialism. They can able to know about the thoughts of socialism and capitalism. They can explain the economic condition Nazism and fascism between two world war.

B. Course Outcomes:

- They can get the knowledge of causes and result of second world war. They should able to cooperate with globalisation. The students able to understand results based on significant role played by UNO and also the Structure, Functions and Challenges of UNO

FASHION TECHNOLOGY AND APPAREL DESIGNING

SRI Y.N. COLLEGE (AUTONOMOUS)

PROGRAMME OUTCOMES(POs)

On successful completion of this programme the students would –

1. Ability to apply historic costume knowledge to modern fashion design construction.
2. Ability to understand the basic concepts of pattern making and designing.
3. Ability to develop measurable statements that concretely formally state what students are expected to learn in a course.
4. Identify and envision solutions in existing fashion systems.
5. Ability to adapt their inspired knowledge and abilities to ongoing changes in global fashionand related creative industries.
6. Ability to work well together as emerging team players and innovative design thinkers.
7. Identify problems, anticipate challenges, and envision solutions in existing fashion systems
8. Understand and incorporate sustainability decisions into their design aesthetics and creativity.
9. Ability to construct a visual merchandising display with specified criteria.

10. Ability to construct tailored garments, in correct sequence of operations.

PROGRAMME SPECIFIC OUTCOMES(PSOs)

The study of Fashion Technology and Apparel Designing will enable the students to:

1. Design and development of Textiles and Apparel products
2. General competencies:
   - Use of REACH CAD and REACH FASHION STUDIO.K
   - Retrieval of information.
3. Use of documentation and standards
4. Explores the different roles.
5. Skill sets, jobs and equipment associated with the development of fashion design field.
6. Examines the processes involved in producing content to meet a specific communication goal toward a target audience.

COURSE OUTCOMES(COs)

SEMESTER - I

FT1G1: Introduction To Fiber And Yarn Science

Course Outcome: After studying the Course the students will get familiarized

with the properties and application of textile fibers.

FT1G2: Information And Computer Design

Course Outcome: After studying the Course the students will be presenting and designing their own designs by using the computer-based software

FT1G3: Communication Skills - I

Course Outcome: After studying the Course students will learn the basic communication skills and learns the proficiency in talking English

FT1S1: Fundamentals Of Fashion Designing

Course Outcome: After studying the Course students will learn the basic classification and types of fashion.

FT1S2: Basics Of Pattern Making And Sewing

Course Outcome: After studying the Course the students will get familiarized with the basics of pattern making and sewing.

SEMESTER - II

FT2G1: Fundamentals Of Textiles

Course Outcome: After studying the Course the students will get familiarized with the fundamentals of textiles.

FT2G2: Communication Skills

Course Outcome: After studying the Course students will learn the basic communication skills and learns the proficiency in talking English.

FT2S1: Elements Of Fashion And Design

Course Outcome: After studying the Course students the will get an understanding of the concepts Elements Of Fashion And Design.

FT2S2: Garment Construction-1

Course Outcome: After studying the Course the students will get familiarized with the garment construction techniques.

FT2S3: Photoshop

Course Outcome: After studying the Course the students will get an insight into the basic concepts photoshop.

FT2S4: Industrial Visit

Course Outcome: The students will be having industrial visit to gain the knowledge about the process of the textile industries.

SEMESTER - III

FT3G1: Entrepreneurship Development

Course Outcome: After studying the Course the students will get familiarized with the entrepreneurship development.

FT3G2: Environmental Studies

Course Outcome: After studying the Course students will learn the basic about the environmental studies.

FT3G3: Soft Skills Training-1

Course Outcome: After studying the Course the students will get an understanding of the concepts soft skills.

FT3S1: Fashion Design Through CAD

Course Outcome: After studying the Course the students will get familiarized with the fashion designing through CAD.

FT3S2: Fashion Accessories

Course Outcome: After studying the Course the students will get an insight into the basic Fashion accessories.

FT3S3: Lace Making Through Crochet Stitches

Course Outcome After studying the Course the students will get an insight into the basic Lace making through crochet.

FT3S4: Mini Project

Course Outcome After studying the Course the students will get an insight about taking a topic and making a mini project and create something out of it.

SEMESTER - IV

FT4G1: Apparel Production Technology

Course Outcome: After studying the Course the students will get familiarized with the apparel production technology.

FT4G2: Textile Wet Processing

Course Outcome: After studying the Course the students will get familiarized with the Textile Wet Processing

FT4S1: Garment Construction-II

Course Outcome: After studying the Course the students will get familiarized with the garment construction techniques.

FT4S2: Garment Surface Ornamentation

Course Outcome: After studying the Course the students will get familiarized with the garment surface ornamentation.

FT4S3: Internship/Industrial Tour

Course Outcome: The students will be having industrial visit to gain the knowledge about the process of the textile industries and the manufacturing of garments from the garment units.

FT4S4: Soft Skill Training- II

Course Outcome: After studying the Course the students will get an understanding of the concept of the soft skills.

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SEMESTER - V

FT5G1: Fashion Business management

Course Outcome: After studying the Course the students will get familiarized with the Fashion Business management.

FT5G2: Environmental Studies-II

Course Outcome: After studying the Course students will learn the basic about the environmental studies.

FT5S1: Pattern Drafting

Course Outcome: After studying the Course the students will get an understanding of the concept of pattern drafting.

FT5S2: Apparel Quality Assurance

Course Outcome: After studying the Course the students will get familiarized with the fashion apparel quality assurance.

FT5S3: History Of Indian Costumes

Course Outcome: After studying the Course the students will get an insight into the basic history of indian costumes.

FT5S4: Portfolio Preparation and Presentation

Course Outcome After studying the Course the students will get an insight into the basic About portfolio preparation and presentation.

SEMESTER - VI

FT6G1: Garment Clothing Care

Course Outcome: After studying the Course the students will get familiarized with the Garment Clothing Care.

FT6G2: Retailing And branding Of Apparels

Course Outcome: After studying the Course the students will get familiarized with the Retailing And branding Of Apparels.

FT6G3: Department Electives

Course Outcome: After studying the Course the students will get familiarized with the fashion forecasting, visual merchandising, research and development for fashion and SWAYAM (courses approved by institution based on a availability during the course duration).

FT6S1: Industry Visit-Textiles

Course Outcome: The students will be having industrial visit to gain the knowledge about the process of the textile industries.

FT6S2: Internship/project work

Course Outcome: After studying the Course the students will get an insight about taking a topic and making a project and create something out of it.

DEPARTMENT OF PARA MEDICAL TECHNOLOGY

Program Specific Outcomes :-

B.Sc., PZC (Paramedical Technology, Zoology & Chemistry)

The main objective of the PZC Degree course is to train the promote, encourage, propagate the science of Para Medical Technology, to educate and train people in Para Medical Science.

In this program the study of Para Medical Technology opting a degree for many students of remote and central area of any state to establish run and maintain institution regional centers, schools, colleges, distance studies program in Para Medical Technology.

Paramedical students are known to submerge into a syllabus that contains a practical approach to the subject. It will provide the adequate training for unemployed youth and to help them for setting up under self employment schemes.

Finally the subject of Para Medical Technology leads students to provide the adequate training for unemployed youth and to help them for setting up under self employment schemes and to provide medical aid in rural area, for the welfare of economically handicapped.

COURSES OFFERED AND COURSE CODES FROM 2012-2020

S.No.	Program Name	Semester	Paper and Course Code	Course Name
1.	PZC	I	I – 1115	Human Anatomy & Physiology
2.	PZC	I	I – 1115	Human Anatomy & Physiology
3.	PZC	II	II – 2115	Basic Principles of Biochemistry
4.	PZC	II	II – 2115	Basic Principles of Biochemistry
5.	PZC	III	III –	Microbiology
6.	PZC	III	III –	Microbiology
7.	PZC	IV	IV – 4115	Pathology
8.	PZC	IV	IV – 4115	Pathology

Program Specific Outcome :-

PSO 1 :- Para Medical Technology has been introduced to prepare the students which finds the main modules of Paramedical with traces of Anatomy, Physiology, Bio-Chemistry and Laboratory Science.

PSO 2 :- This course imparts the required skills for the detection of diseases, operation and application of various advance techniques.

PSO 3 :- After the expose of the Para Medical Technology, students would be able to detect harmones and toxi substances in blood samples and also understand the basis of endocrine disorders.

PSO 4 :- Ultimately, a bachelor degree in Para Medical Technology grants the tools needed to students to perform various staining techniques and understand principle and application of various techniques.

Course Outcome :-

S.No. **Course Outcome**

Human Anatomy & Physiology :-

1. The prime concern of this syllabus is to learn the terminology of the subject and basic knowledge of cells and tissues and to understand anatomy of human body. This subject will develop an understanding of the structure and function of organs and organ systems in normal human body.
2. Students will develop a vocabulary of appropriate terminology to effectively communicate information related to anatomy and recognize the anatomical structures.
3. The prime concern of Physiology is to integrate basic knowledge of cells, tissues, blood, physiological functions and diseases of systems.
4. This subject will develop an understanding of the function of organs and organ systems in normal human body. Students will able to explain the physiological systems of body and also understand the basis of diseases.

Biochemistry :-

5. This paper aims at understanding the chemical properties of the bio molecules, their functions and biomedical importance.
6. Students will know the basics of reagent preparation, instrument handling and can perform common analytical in Clinical Biochemistry.
7. Students will understand the chemistry, function and biological importance of Carbohydrates, Proteins, Lipids, Nucleic acids, Enzymes, Vitamins and Minerals.

Microbiology :-

8. This subject gives a general insight into the history, basics of microbiology and imparts knowledge about equipment used in microbiology.

9. This course make the students to know handling of instruments and sterilization techniques.
10. Students would be able to identify and differentiate bacteria and fungus in biological samples.

<u>Pathology</u> :-

11. The unique preposition of this paper is that the students learn the basic techniques with clotting mechanism, blood banking techniques and automation.
12. Students can perform the various type of tests involved in hematology, immunohematology, coagulation profile and can handle automated instruments.

WEB TECHNOLOGY AND MULTIEDIA

SRI Y.N. COLLEGE (AUTONOMOUS)

PROGRAMME OUTCOMES(POs)

On successful completion of this programme the students would –

11. Ability to develop proficiency in Webpage Development and website management.
12. Ability to develop proficiency in creating dynamic Web Interface.
13. Ability to design a web page using Image, Audio and Video editing tools.
14. Ability to understand the basic concepts of networking.
15. Define multimedia to potential clients.
16. Identify and describe the function of the general skill sets in the multimedia industry.
17. Identify the basic components of a multimedia project.
18. Identify the basic hardware and software requirements for multimedia development and playback.

PROGRAMME SPECIFIC OUTCOMES(PSOs)

The study of Web Technology and Multimedia Programme will enable the students to:

7. Design and development of web-pages and web-application.
8. Use of development tools.
9. General competencies:
   - Use of web technology
   - Retrieval of information.
10. Use of documentation and standards
11. Explores the different roles.
12. Skill sets, jobs and equipment associated with the development of digital media.
13. Examines the processes involved in producing content to meet a specific communication goal toward a target audience.

COURSE OUTCOMES(COs)

SEMESTER - I

WM 101: Introduction To Computers and Multimedia

Course Outcome: After studying the Course the students will get familiarized with the fundamentals of computers and multimedia technologies.

WM 102: Photoshop

Course Outcome: After studying the Course the students will be presenting and designing their own designs and banners

WM 103: Web Designing Using HTML and CSS

Course Outcome: After studying the Course the students will get familiarize with the basics of html and CSS and design the web pages

WM 104: Communications Skills - I

Course Outcome: After studying the Course students will learn the basic communication skills and learns the proficiency in talking English

WM 105: Ict Skills

Course Outcome: After studying the Course the students will get familiarized with the basics of computers and networking skills.

SEMESTER - II

WM 201: JAVA SCRIPT

Course Outcome: After studying the Course the students will get familiarized with the basic JavaScript language

WM202 : ANALYSIS AND DESIGN FOR WEB APPLICATIONS

Course Outcome: After studying the Course the students will get an

insight view on the applications on web

WM203: VISUAL EFFECTS

Course Outcome: After studying the Course students the will get an understanding of the concepts and the applications of VFX

WM 204: Introduction to 2D Animation

Course Outcome: After studying the Course the students will get familiarized with the animation techniques

WM 205: Adobe Edge Animate CC

Course Outcome: After studying the Course the students will get an insight into the basic concepts of edge animate and use the applications of it.

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DR. C.S. RAO P.G. CENTRE: SRI Y.N. COLLEGE (AUTONOMOUS), NARSAPUR

DEPARTMENT OF ENGLISH

M.A. ENGLISH LANGUAGE AND LITERATURE (M.A ELL)

Programme Outcomes

The study of M.A. ELL Programme will enable the students to:

1. Get cognizance of the social, economic, and political perspectives of the literatures producedand also translated into English especially in the third world nations

2. Receive training in the assimilation of the contextual critical understanding of literature against the liberal humanist trend

3 Tutor in the postcolonial and post modernist understanding of the non-native literatures in English

4 Thrust on ecocriticism and women's writing which will be comprehended as bearingeconomic, political, cultural and psychological impact in the perception of literature by learners

Programme Specific Outcomes

The study of M.A. ELL Programme will specifically enable the students to:

1. Comprehend linguistics as applied in translation and the teaching of English as L2 besides understanding the history of the English language and the structure of modern English and non-native literatures in English as well

2. Work on Practical research which would help the students to be able to be original and interested in newer perceptions of literature,

3. Think and write creatively and critically and will be able to interpret any piece of writing

M.A. ENGLISH LANGUAGE AND LITERATURE

Course Outcomes

- The course introduces the student to the Global Literatures produced in English and translated into English
- British Literature makes the foundation in the first two semesters, the course diversifies into literatures produced in all English speaking cultures.
- We offer a diverse range of critical/theoretical texts from European and Indian traditions that arose from specific socio-economic-linguistic philosophical theories
- This course aims to equip the student with essential critical tools to comprehend literature in particular and culture in general
- Nevertheless, the program also aims at English Language Teaching for professional applications
- In addition, digital material is available to many texts prescribed in the syllabus
- This will enhance the learners extensively to equip them technically via Audio-visual for a thorough understanding

SEMESTER I

S.NO	Paper Code	Title	Course Outcomes
1.	10601	**INTRODUCTION TO LITERATURE**	The course outcome is primarily to understand what literature is, what is enjoyable to read, and profitable to learn It addresses some basic questions in the professional study of literature in English such as: *a)* a piece of writing *literature* *b)* the major types/kinds of literature *c)* special qualities and effects they convey to the readers *d)* recognizing the language that embodies these special qualities and effects.
2.	10602	**POETRY:THE RENAISSANCE TO THE 18TH CENTURY**	The course outcome is to familiarize the student with different movements of poetry and genres from Britain like: sonnet, epic, mock epic, lyric, epithalamion and metaphysical poetry and to expose the student to the expanded vocabulary and imagery in consequence of geographical and intellectual explorations that took place during Renaissance
3.	10603	**DRAMA:THE RENAISSANCE TO THE18TH CENTURY**	The course outcome is to acquaint the student with British Drama from the time it took a formal shape in Tragedies and Comedies to the age of Comedy of Manners It aims to enable the students to understand and evaluate Renaissance Humanist ways of thinking that redefined man‟s relationship with authority, history, science and the future

4.	**10604**	**PROSE &FICTION:THE RENAISSANCE TO THE 18TH CENTURY**	**The course outcome is to provide the student with an overview of the evolution of prose writing as an artistic pursuit in Britain and to introduce English Novel from its rise and through its growth giving various accounts of its characteristic forms and concerns**
5.	**10605**	**INTRODUCTION TO THE STUDY OF LANGUAGE& LANGUAGE SKILLS**	The course outcome is to aim at enabling learners understand and use some of the fundamental and the most essential concepts required to attempt a comprehensive description and the study of Language and Language Skills in general and English Phonetics, Skills of Communication in particular

SEMESTER II

S.NO	Paper Code	Title	Course Outcomes
1.	**20601**	**POETRY: 19TH CENTURY**	The main outcome of this course is to help the student recognize the striking distinctiveness of subject matter, tone, temper and style in nineteenth century poetry
2.	**20602**	**DRAMA: 19th & 20th CENTURIES**	The outcome of this paper is to acquaint the student with 19th and 20th century dramas in Britain which represented the modern age in pursuit of conformity and all its instabilities, dilemmas and fragmented identities
3.	**20603**	**PROSE& FICTION: 19TH CENTURY**	**The course outcome is to provide the student with a detailed instruction of the evolution of the Novel and its establishment as the most significant paradigm of literary culture of England in the 19th century** **The paper also helps the student to know the prose models of the period which proved prose an ideal form for literary expression**
4.	**20604**	**THE 20TH CENTURY BRITISH LITERATURE**	**This course outcome aims to introduce some major topics, authors, and critical issues pertinent to English Literature and thought of the early and late twentieth century**

			It will be necessary, therefore, to consider *modern* from a variety of perspectives and persuasions
5.	**20605**	**INTRODUCTION TO COMMUNICATION SKILLS**	**The course aims at preparing the student use English appropriately and effectively in various contexts that demand communicative ability**

SEMESTER III

S.NO	Paper Code	Title	Course Outcomes
1.	**30601**	**AMERICAN LITERATURE: EARLY TO THE 19TH CENTURY**	**The outcome of this course is to introduce some major ideas of its origin and texts that gave American literature with its unique identity and its place of pride among the literatures of other cultures and nations**
2.	**30602**	**INDIAN WRITING IN ENGLISH**	**The major outcome of this course is to familiarize the student with the origin, evolution and current status of Indian Writing in English**
3.	**30603**	**POST COLONIAL LITERATURE**	**The course outcome is to introduce the writings of those people across the world formally colonized by Britain**
4.	**30604**	**LITERARY CRITICISM**	**The outcome of this course is to help the student recognize the change of concentration in literary criticism from content to form** **This course aims at providing the student a useful conceptual scheme for distinguishing between different kinds of critical principles**
5.	**30605**	**INTRODUCTION TO ENGLISH LANGUAGE TEACHING.**	The outcome of the course is to aim at introducing students to the history, methods, approaches and techniques followed in English Language Teaching

			It exposes student to the basic concepts of teaching language through literature

S.NO	Paper Code	Title	Course Outcomes
1.	**40601**	**AMERICAN LITERATURE: MODERN & CONTEMPORARY**	**The course outcome is to introduce to the student of some major writers and sample contemporary issues in American literature and thought**
2.	**40602**	**INDIAN LITERATURE IN ENGLISH TRANSLATION**	**The outcome of this course is to introduce to the students some seminal literary and critical texts from Indian languages available in English translation**
3.	**40603**	**CONTEMPORARY LITERARY THEORY**	**The course outcome aims at familiarizing the student with Literary Theory of the latter part of the 20th century that was fundamentally influenced by the concepts borrowed from Philosophy, Linguistics, and Marxism**
4.	**40604**	**ENVIRONMENTAL LITERATURE**	**The outcome of this course helps the students to familiarize about how nature and the natural world are imagined through literary texts In the context of environmental concerns, it is**

			promised that the contemporary attitude toward environment can be understood through its literary history
5.	**40605 (A)**	**FURTHER STUDIES IN THEORY & PRACTICE OF ENGLISH LANGUAGE TEACHING**	**The outcome of this course will enable the students to realize the scope and wide application of the purpose- driven ELT by introducing the foundational concepts of its emerging areas** **The course aims at making the student see the existence of purpose and needs from both the teacher"s and the learner"s point of view in the language teaching-learning situation**

SEMESTER IV

DEPARTMENT OF MANAGEMENT STUDIES

DR. C.S. RAO P.G. CENTRE: SRI Y.N. COLLEGE(AUTONOMOUS)

M.B.A

PROGRAMME OUTCOMES(POs)

On successful completion of the MBA programme the students would –

1. Acquire the theoretical as well as practical knowledge about different aspects of the business management which prepare them to work in the public and private organisations at executive level positions.
2. Obtain the ability to indentify, formulate and provide innovative solutions to the real world complex business problems.
3. Get the ability to indentify entrepreneurial opportunities and leverage managerial skills for managing start-ups as well as professionalizing and growing business at National and International levels.

PROGRAMME SPECIFIC OUTCOMES(PSOs)

The study of MBA Programme will enable the students to:

14. Gain Managerial and Entrepreneurial aptitude and skills
15. Develop planning and decision-making skills
16. Acquire cognitive and behavioural skills
17. Improve organising and leading skills
18. Comprehend the national and global business environment in the right perspective
19. Develop a holistic view of the business, industry and economy.

COURSE OUTCOMES(COs)

CP 101: PERSPECTIVES OF MANAGEMENT

Course Outcome: After studying the Course the students will get familiarized with the Principles, Theory, Process and Practice of Management .

CP 102: ACCOUNTING FOR MANAGEMENT

Course Outcome: After studying the Course the students will get an insight into the principles and techniques of accounting and their utilization in business planning and decision-making.

CP 103: BUSINESS ENVIRONMENT

Course Outcome: After studying the Course the students will get familiarized with the National and International business environments and their implications to business.

CP 104: MANAGERIAL ECONOMICS

Course Outcome: After studying the Course students will comprehend the economic concepts and theories and their applications in Management decision-making.

CP 105: MANAGERIAL COMMUNICATION SKILLS

Course Outcome: After studying the Course the students will get familiarized with the principles, techniques and skills of Communication.

CP 106 ORGANISATIONAL BEHAVIOUR

Course Outcome: After studying the Course the students will get familiarized with the levels of organizational behaviour, group dynamics, conflicts, change and organisational culture.

CP 107: QUANTITATIVE TEACHNIQUES FOR MANAGEMENT

Course Outcome: After studying the Course the students will get an insight into the Statistical and Mathematical techniques and their applications in business decision making.

CP 201 :MARKETING MANAGEMENT

Course Outcome: After studying the Course students the will get an understanding of the concepts, process and strategies of Marketing management.

CP 202: FINANCIAL MANAGEMENT

Course Outcome: After studying the Course the students will get familiarized with the basic process, decisions and techniques of Financial Management.

CP 203: HUMAN RESOURCE MANAGEMENT

Course Outcome: After studying the Course the students will get an insight into the basic concepts of Human Resource Management and the various functions of HRM including Industrial Relations in the liberalized environment.

CP 204: OPERATIONS MANAGEMENT

Course Outcome: After studying the Course the students will get familiarized with the decision making process and various aspects of Production and Operations Management.

CP 205 : OPERATIONS RESEARCH

Course Outcome: After studying the Course the students will get familiarized with the application of the Operations Research tools in the business decision making.

CP 206: COMPUTER APPLICATIONS IN MANAGEMENT

Course Outcome: After studying the Course the students will get an insight into the basic features of Computer Systems and their Applications in the Managerial Decision Making.

CP 207: RESEARCH METHODOLOGY FOR MANAGEMENT

Course Outcome: After studying the Course the students will get an insight into the basic process and techniques of Research Methodology for the purpose of Management decision making and for conducting Research at different levels.

III SEMESTER

CP 301: ENTREPRENEURSHIP

Course Outcome: After studying the Course the students will get familiarized with the principles and process of Entrepreneurship and become enthused to float start- ups.

CP 302 VUCA Management

Course Outcome: After studying the Course the students will become aware of the Volatile, Uncertain, Complex and Ambiguous nature and challenges of the business environment and would be able to design appropriate strategies to combat the challenges.

CP 303: CORPORATE LEGAL FRAMEWORK

Course Outcome: After studying the Course the students will get an exposure to the Corporate laws affecting the operations of business enterprises.

FM 304: FINANCIAL MARKETS AND SERVICES

Course Outcome: After studying the Course the students will gain an in-depth knowledge and skills in the Concepts and Practical dynamics of Financial Markets and Financial Services.

FM 305: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Course Outcomes: After studying the Course the students will get an insight into the Concepts and Practical applications of Security Analysis and Portfolio Management and gain practical skills to operate as Security Analysts and Share Consultants.

MM 304 – CONSUMER BEHAVIOUR AND CUSTOMER RELATIONSHIP MANAGEMENT

Course Outcome: The study of the Course will enable the students to comprehend the totality and dynamics of Consumer Behaviour and design suitable CRM strategies.

MM 305: SERVICES MARKETING

Course Outcome: On completion of the Course the students will get exposed and enabled to design effective strategies for Services Marketing.

HRM 304: INDUSTRIAL RELATIONS

Course Outcome : After studying the Course the students will get familiarized with the Dynamics of Industrial Relations and would emerge as effective HR Managers.

HRM 305: COMPENSATION AND WELFARE MANAGEMENT

Course Outcome: The study of this Course will expose the students to the Concepts and Strategies of Compensation and Welfare Management and enable them to design conducive compensation packages in the corporate world.

SEMESTER – IV

401: STRATEGIC MANAGEMENT

Course Outcome: On completion of the Course the students will gain the knowledge of different corporate competitive strategies and emerge as strategists to transform companies into strategic organisations.

FM 402: FINANCIAL DERIVATIVES

Course Outcome: After studying the Course the students will get an insight into the Concepts and Practical applications of derivatives in the Security markets and would emerge as the Share Consultants with expert Knowledge

FM - 403: Banking and Insurance

Course Outcome: On completion of the Course the students would be equipped with the knowledge of the structure and functioning of the Banking and Insurance Industries and would facilitate them to take up carriers in the Banking and Insurance fields

FM - 404: INTERNATIONAL FINANCIAL MANAGEMENT

Course Outcome: After studying the Course the students will get familiarized with the issues, instruments and institutions of the International Financial Management that would help them to take up global business successfully.

MM 402: SALES AND DISTRIBUTION MANAGEMENT

Course Outcome: On completion of the Course the students will get insights into the issues of personal selling, prospecting and managing of field Sales Force and physical distribution and logistics.

MM – 403: ADVERTISING AND BRAND MANAGEMENT

Course Outcome: After studying the Course the students will get an insight into the Concepts and Practical applications of Advertising and Brand Management and emerge as Advertising Designers.

MM - 404: RETAIL MANAGEMENT

Course Outcome: The study of this Course will bestow the students with the knowledge and practical skills of managing organized Retail Stores and Malls.

HRM 402: PERFORMANCE MANAGEMENT AND COUNSELLING

Course Outcome: After studying the Course the students will get an insight into the strategies of Performance Management and Counselling

HRM - 403: STRATEGIC HUMAN RESOURCE MANAGEMENT

Course Outcome: After studying the Course the students will get familiarized with the Concepts and issues of Strategic Human Resource Management.

HRM - 404: INTERNATIONAL HUMAN RESOURCE MANAGEMENT

Course Outcome: On completion of the Course the students will be endowed with the concepts and strategies of International Human Resource Management and emerge as vibrant HR Managers in the MNCs.

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DEPARTMENT OF COMPUTER SCIENCE
PROGRAMME: MCA (MASTER OF COMPUTER APPLICATIONS)

PO No.	Programme Outcomes Upon completion of the MCA Programme, the graduate will be able to
PO-1	Acquire the abilities in Computing, Aptitude and Accounts to find novel solutions for the complex problems in IT field.
PO-2	Acquire the knowledge to understand and analyze the problem, design a paradigm and to develop a software product to cater the needs of Industry and Society
PO-3	Instill the confidence in students for self learning to update the current trends in IT to become an efficient Professionals
PO-4	Understand the Code of Ethics and Standards of the computer Professionals and develop the young minds with Social responsibilities and commitments
PO-5	Apply the Management principles and skills to develop a software product as a team member and effectively manage the team as well as the product

PSO No.	Programme Specific Outcomes Upon completion of these courses the student would
PSO-1	Acquire academic excellence with an aptitude for higher studies and research
PSO-2	Understand the concepts of programming, computation and management and apply them in the field of Computer Science
PSO-3	Apply the skills gained to analyse, design and to develop effective software products
PSO-4	Understand the recent technologies and tools to provide innovative ideas and solutions to the existing problems.
PSO-5	Apply the managerial skills in working environment to work effectively with other

	team members
PSO-6	Apply the appropriate Software Engineering practices to deliver a Quality products catering to the needs of Industry and Society at a large.

SEMESTER I

Course Title	**Paper I – Computer Fundamentals and Programming in C**
Code	**MCA 1.1**
CO No.	**Course Outcomes**
CO-1	Understand and design a computational solution for a given problem.
CO-2	Analyze the flow of the program and various stages in program execution.
CO-3	Learn the basics of C and the programming constructs.
CO-4	Apply structures, strings, arrays, pointer and files for solving complex computational problem.
CO-5	Implement the User defined functions and files in real time Problems.
CO-6	Able to develop software for solving mathematical and real time problems

Course Title	**Paper II – Data Structures**
Code	**MCA 1.2**
CO No.	**Course Outcomes**
CO-1	Understand the fundamentals of Data Structures and basic concepts of String Processing, Linear Arrays, Records and Pointers.

CO-2	Analyze the representation of Linked Lists in memory, Stack, Queues and implement real time applications in Stack and Queues.
CO-3	Explore the structure of Trees, basic operations of Trees, analyze and illustrate the algorithms.
CO-4	Apply data structures and algorithms in real time applications.
CO-5	Analyze the various algorithm design and implementation.
CO -6	Develop solutions using advanced algorithms for various kinds of problems.

Course Title	**Paper III – Discrete Mathematical Structures**
Code	**MCA 1.3**
CO No.	**Course Outcomes**
CO-1	Understand the fundamentals of Logic-Prepositional Equivalences-Truth tables-Tautologies-Predicates and Quantifiers-Sets- -Sequences and Summations -Growth functions - relations and their properties
CO-2	Know the basics of Counting- Pigeonhole Principle- Combinations and Permutations-Generalized Per mutations and Combinations
CO-3	Solving Recurrence Relations-Divide and Conquer relations- Inclusion and Exclusion-Applications of Inclusion-Exclusion.
CO-4	Understand Graphs-Terminology-Relations and Directed Graphs - Representations of Graphs- Isomorphism-Connectivity- Euler and Hamiltonian Paths - Shortest Path problems- Planar Graphs - Graph Coloring-
CO-5	Acquire the knowledge of trees- Applications of trees- Traversals-Trees and sorting-Spanning Trees-Minimum Spanning Trees.
CO-6	Understand Boolean Functions-Representing Boolean Functions -Logic Gates-Minimizations of Circuits-Languages and Grammars- Finite State Machines with and with no output.

Course Title	**Paper IV – Computer Organization**
Code	**MCA 1.4**

CO No.	Course Outcomes
CO-1	Recall and relate the various number systems.
CO-2	Explain the Sequential Circuits and Combinational Circuits.
CO-3	Illustrate the concepts of instruction cycle, instruction code and I/O interrupts.
CO-4	Differentiate different types of addressing modes.
CO-5	Summarize on memory organization.
CO-6	Acquire the knowledge of working principles of computer systems

Course Title	Paper V – Management Accountancy
Code	MCA 1.5

CO No.	Course Outcomes
1.	Understand the nature of accounting ,systems of accounting, concepts and yhe procedure to prepare the trail balance
2.	Explain the financial statements , trading account, profit and loss account and balance sheet with illustrations.
3.	To give an input to find a solution to the problem of liquidity through financial analysis and also explain ratio analysis and funds flow analysis, working capital cycle.
4.	Explain the cost control techniques like budgetary control through budgets and types of budgets.
5.	Understand the marginal costing technique , CVP analysis and the calculation of BEP and its applications.
6.	Explain the Computerized accounting system, coding of logic and codes required and also to understand different files and outputs obtained.

SEMESTER II

Course Title	**Paper I – Probability, Statistics & Queuing Theory**
Code	**MCA 2.1**

CO No.	**Course Outcomes**
CO-1	Discuss the concepts and definitions of Probability theory, Specify the theorems on probability.
CO-2	Explain the discrete and continuous probability distributions and also mathematical expectation concepts
CO-3	Describe concepts of the sampling theory like population, parameter, sample, statistic and so on.
CO-4	Explain the concepts and properties in Testing of hypothesis like proportion tests and mean tests
CO-5	Describe the Small Sample Tests like Test for means, Test for goodness of fit etc.,

CO-6	Define and Explain the Queueing models like FIFO, LIFO, etc.,

Course Title	**Paper II – Database Management Systems**
Code	**MCA 2.2**
CO No.	**Course Outcomes**
CO-1	Explain the basic concepts of database system and fundamental relational algebraic operations.
CO-2	Explain, Apply SQL queries, Create ER model for any database applications.
CO-3	Explain the normalization techniques; learn the basic idea of object – based database.
CO-4	Describe the physical storage media and file structure, compare the file organization techniques; understand, analyze & compare Indexing & Hashing techniques.
CO-5	Discuss the concepts of Transaction and Concurrency control, classify the database system architecture, Understand and apply SQL queries.
CO-6	Acquire the knowledge of working with database.

Course Title	**Paper III – Object Oriented Programming With C++ & JAVA**
Code	**MCA 2.3**
CO No.	**Course Outcomes**
CO-1	Describe the principles of object – oriented programming.
CO-2	Apply the concepts of data encapsulation, inheritance, and polymorphism to large– scale software.
CO-3	Investigate the concepts of Graphical User Interfaces.
CO-4	Test and Formulate problems as steps so as to be solved systematically.

CO-5	Develop C++ & Java applications for problems in current scenario.
CO-6	Apply the programming concepts of Java to solve real time problems.

Course Title	**Paper IV – Formal Languages & Automata Theory**
Code	**MCA 2.4**
CO No.	**Course Outcomes**
CO-1	Understand the basic Concepts of Finite State Systems, Chomsky Hierarchy of Languages, Deterministic and Non-Deterministic Finite Automata, Regular Expressions.
CO-2	Know the Formal Languages and Grammars, Regular Sets and Regular Grammars, Pumping Lemma for Regular Sets, Decision Algorithm for Regular Sets, Minimization of Finite Automata.
CO-3	Context Free Grammars and Languages, Derivation Trees, simplification of Context Free Grammars, Normal Forms, Pumping Lemma for CFL, Closure properties of CFL‟s.
CO-4	Concepts of Push-Down Automata and Context free Languages, Parsing and Push-Down Automata.
CO-5	Turing Machine, Construction of Turing Machines, Combining Turing Machines. Universal Turing Machines. The Halting Problem, Decidable & Undecidable Problems - Post Correspondence Problem.
CO-6	Understand the basic Syntax of the Prepositional Calculus & Predicate Calculate Calculus

Course Title	Paper V – Information Systems & Organizational Behavior
Code	MCA 2.5

CO No.	Course Outcomes
CO-1	Recognize, Explain the concept of Organization, Background and Foundation of Organizational Behavior.
CO-2	Explain the models of Man, Personality and learning; analyze the behavior of individuals and groups in organizations.
CO-3	Discuss the concepts of Attitude, Motivation & Work stress, apply Stress Management in the Personal life.
CO-4	Describe, Analyse the concepts of Interpersonal behavior, Explain group dynamics & group decision making, compare the different leadership styles and apply them in life situation.
CO-5	Explain the Organization theory; Compare the various organization structures, Differentiate centralization & decentralization.
CO-6	Develop good personality as an effective employee in an organization

SEMESTER III

Course Title	Paper I – Computer Networks
Code	MCA 3.1

CO No.	Course Outcomes
CO-1	To educate concepts, vocabulary and techniques currently used in the area of computer networks.
CO-2	To study protocols, network standards, the OSI model, cabling, networking components, and basic LAN design.
CO-3	To accumulate existing state of the art in network protocols, architectures, and applications.
CO-4	To be familiar with contemporary issues in networking technologies.
CO-5	Analyze the various concepts of networks related to OSI and TCP reference models
CO-6	To know various networks such as Wireless Ad-hoc Networks, Sensor Networks, MANETs etc.

Course Title	Paper II – Artificial Intelligence and Expert Systems
Code	MCA 3.2

CO No.	Course Outcomes
CO-1	Educate concepts of AI , Terminology of AI, describe agents and its environments
CO-2	Describe concepts of informed and uniformed search strategies
CO-3	Explain local search algorithms and optimization problems
CO-4	Describe knowledge based agents, propositional logic and reasoning patterns in propositional logic.
CO-5	Explain the concept of uncertainty and uncertain reasoning
CO-6	Describe the expert systems, applications and domains of expert systems.

Course Title	Paper III – Design and Analysis of Algorithms
Code	MCA 3.3

CO No.	Course Outcomes
CO-1	Ability to analyze the performance of algorithms.
CO-2	Ability to choose appropriate algorithm design techniques for solving problems.
CO-3	Ability to understand how the choice of datasructures and the algorithm design methods impact the performance of programs.
CO-4	To clear up troubles the usage of set of rules design methods including the grasping approach,devide and overcome, dynamic programming . backtracking and department and criteria.
CO-5	To understand the variations among tractable and intractable problems
CO-6	To introduce p and np classes

Course Title	Paper IV – Operating Systems
Code	MCA 3.4

CO No.	Course Outcomes
CO-1	List and Recognize the various types of operating system.
CO-2	Explain, Discuss, Compare and Contrast the various scheduling algorithms
CO-3	Describe, Compute and choose the correct scheduling algorithm for the given problem
CO-4	Explain the Deadlock concepts and Memory Management Techniques
CO-5	Discuss the concepts of file systems and mass storage structure, explain the different allocation methods, compare
CO – 6	Acquire the knowledge of operating system software

Course Title	Paper V – **Web Technologies**
Code	**MCA 3.5**

CO No.	Course Outcomes
CO-1	Explain features of E- commerce, and its applications
CO-2	List types of Web pages and dynamic web pages with examples
CO-3	Describe active server pages, Java servlet with examples
CO-4	Discuss the importance of Java Remote method invocation in sever side applications
CO-5	Explain the significance of Electronic data interchange in international trade, Architecture of EDI
CO-6	Discuss the emergence of Wireless application protocol, WAP and it's future

SEMESTER IV

Course Title	**Paper I – Information Security and Cryptography**
Code	**MCA 4.1**

CO No.	Course Outcomes
CO-1	Explain the fundamentals of network security.
CO-2	Learn the encryption and digital signature techniques.
CO-3	Illustrate various encryption techniques with applications involved.
CO-4	Develop enhanced network security algorithms
CO-5	Analyze the various concepts of networks related to OSI and TCP reference models
CO-6	Explain the Message Authentication and Hash algorithms

Course Title	Paper II – Operations Research
Code	MCA 4.2

CO No.	Course Outcomes
CO-1	Overview of Operations Research methodologies
CO-2	Explain different Operations Research Techniques and Procedures
CO-3	Assessing variant Operations Research Terminologies to evaluate complex problems
CO-4	Evaluating complex Simplex methods to obtain proper solutions
CO-5	Discuss complete solutions for Linear Programming Problem
CO-6	Analyze the Techniques and concepts of Operations Research

Course Title	Paper III - Elective I - Computer Graphics
Code	MCA 4.3.2

CO No.	Course Outcomes
CO-1	Explain Computer Graphics applications and describe Graphic devices and explain I/O devices
CO-2	Explain different Graphic conversion algorithms and evaluate their applications.
CO-3	Explain Window and Clipping algorithms and evaluate their mathematical applications.
CO-4	Explain 2D transformations and evaluate their mathematical applications.
CO-5	Explain three dimensional perspectives. Geometry and explain different methods
CO-6	Explain structures and hierarchical modeling methods

Course Title	Paper IV – Object Oriented Software Engineering
Code	MCA 4.4

CO No.	Course Outcomes
CO-1	Define software, explain the nature of software, software process and software engineering practice, explain and compare the various models.
CO-2	Discuss the requirements, analyze and design the various requirement models.
CO-3	Explain the design concepts, analyze and apply the concepts to design architectural, component level & User interface models, list the golden rules.
CO-4	Explain the quality concepts, Software Quality Assurance tasks, discuss the strategies of testing, explain the types of testing.
CO-5	Explain the Product, process & project metrics, discuss the estimation modeling, understand the emerging trends, Prepare a Product.
CO-6	Become an efficient software developer.

Course Title	Paper V – Data Warehousing and Data Mining
Code	MCA 4.5

CO No.	Course Outcomes
CO-1	Realize the basic terminologies of Data mining principles and techniques
CO-2	Preprocess the data by using various Techniques and algorithms
CO-3	Understand the Data warehousing Models and Architecture
CO-4	Analyzes the various algorithms in Data Mining
CO-5	Identifies different applications involved in Data Mining
CO-6	As a Data analyst can analyze the present data and predict the future events of various fields.

SEMESTER V

Course Title	Paper I – Wireless and Ad-hoc Networks
Code	MCA 5.1

CO No.	Course Outcomes
CO-1	To understand the basics of Ad-Hoc & Sensor Networks.
CO-2	To learn various fundamental and emerging protocols of all layers in Ad-Hoc Network.
CO-3	To study about the issues pertaining to major obstacles in establishment and efficient management of Ad-Hoc and Sensor Networks.
CO-4	To understand the nature and applications of Ad-Hoc and Sensor Networks.
CO-5	To understand various security practices and protocols of Ad-Hoc and Sensor Networks.
CO -6	Build sensor networks in various fields.

Course Title	Paper II – Cyber Security
Code	MCA 5.2

CO No.	Course Outcomes
CO-1	Educate concepts of information security, principles and concepts of data security
CO-2	Explain the data leakage, Data protection and DLP limitations
CO-3	Describe basic concepts of cyber security and domains of cyber security policy
CO-4	Explain cyber security evolution and it's challenges
CO-5	Describe cyber security metrics, security management goals and security frame works.
CO-6	Explain the cyber user issues and the cyber conflict issues like cyber welfare

Course Title	Paper III – Big Data Analytics
Code	MCA 5.3

CO No.	Course Outcomes
CO-1	Explains the fundamentals and categorize and summarize Big Data and its importance.
CO-2	Identifies the usage of big data analytics and its applications
CO-3	Summarizes operational issues of big data in various environments
CO-4	Differentiate various Big data technologies like Hadoop MapReduce
CO-5	Distinguish various big data analytic systems and apply tools and techniques to analyze Big Data.
CO-6	Use advanced big data technologies for handling massive volume of data

Course Title	Paper IV – Elective II - Cloud Computing
Code	MCA 5.4.1

CO No.	Course Outcomes
CO-1	Discuss the fundamental concepts in cloud.
CO-2	Analyze the cloud enabling technologies.
CO-3	Know and explain the Infrastructure oriented mechanisms.
CO-4	Comprehend the Cloud security mechanisms.
CO-5	know and distinguish the delivery models from provider and consumer perspective.
CO-6	Develop secure cloud based applications.

Course Title	Paper V – Elective III - Software Testing and Quality Assurance
Code	MCA 5.5.3

CO No.	Course Outcomes
CO-1	Discus the Software Testing strategies
CO-2	Analyze the Software Quality Assurance concepts
CO-3	Assessing Software Terminologies and their importance
CO-4	Take the necessary steps to overcome the problems during the software development In Testing
CO-5	Distinguish various techniques to rectify the errors and enhance the quality in the software development
CO-6	In Software development, the Software Testing and Quality Assurance plays a vital role.

SEMESTER VI

Course Title	Project Work
Code	MCA 6.1

CO No.	Course Outcomes
CO-1	To understand the web designing process based projects.
CO-2	To understand the changes occurring in the field of software through IEEE projects.
CO-3	To review latest technologies and innovation in the field of Industry.
CO-4	To assess the coding process given by the students.
CO-5	Elevate the students to meet the global standards.
CO-6	To give an input to present the project on different areas which are suitable to the present scenario.

DEPARTMENT OF MATHEMATICS
PROGRAMME: M.Sc (Maths)

PO No.	Programme Outcomes Upon completion of the M.Sc.degree programme, the graduate will be able to
PO-1	Obtain through knowledge in pure mathematics.
PO-2	Obtain a basic knowledge in research & methodology.
PO-3	Develop aptitude skills and skill based knowledge.
PO-4	Improve logical and reasoning capacity.
PO-5	Receive training to face SET/NET examinations.

PSO No.	Programme Specific Outcomes Upon completion of these courses the student would

PSO-1	Become an individual academic excellence in the discipline of mathematics.
PSO-2	Acquire knowledge for research programme.
PSO-3	Be an entrepreneur for training SET/NET examinations.
PSO-4	Been capable of executing research and research projects.
PSO-5	Become a Software professional.

Course Title	**Paper I –Algebra 1**
Code	**M101**
CO No.	**Course Outcomes**
CO-1	Describethe definitions of Automorphism, Conjugacy and G- sets with it‟s examples.
CO-2	Discussfinitely generated abelian groups and invariants of finite abelian groups.
CO-3	ExplainSylow's first theorem, Sylow‟s second theorem and Sylow‟s third theorem with it‟s examples.
CO-4	Discussideals and homomorphism, Maximal ideal and prime ideal, Nilpotent ideal and nil ideal.

CO-5	Simply explaine Zorn‟s lemma.
CO-6	Learnthe unique factorization domain, principal ideal domain and Euclidean domain.

SEMESTER I

Course Title	**Paper II – Real Analysis-1**
Code	**M102**

CO No.	**Course Outcomes**
CO-1	Describe the finite countable and uncountable sets,Metric spaces and Compact sets.
CO-2	Explain the convergent sequences & Cauchy sequences & some special sequences.
CO-3	Solve the problems to using ratio and root tests and analyze power series
CO-4	Understand the limits of functions & continuity and compactness and Monotonic functions.
CO-5	Learn the Mean value theorems ,L- Hospital's Rule and Taylor's theorem.

Course Title	Paper III – Differential Equations
Code	M103

CO No.	Course Outcomes
CO-1	Applications of second order linear differential equations will be studied.
CO-2	Solve Homogeneous equations and use of a known solution to find another.
CO-3	Recognise differential equations that can be solved by each of three methods.
CO-4	Solve the boundary value problems and by Strum Comparison theorem solved Eigen values,Eigen functions.
CO-5	Review of Power Series and solved first and second order linear equations to verify ordinary, regular singular points.
CO-6	Understand the linear system and solved homogeneous linear system with constant Co-efficients.

Course Title	Paper IV – Topology
Code	M104

CO No.	Course Outcomes
CO-1	Gain an understanding the algebra of sets , functions,Product of sets , Partitions and equivalence relations.
CO-2	Learnthe basic concepts of openset and closed sets and apply these two sets in real life examples.
CO-3	Develop the Knowledge on Topological spaces through the participating in a Quiz.
CO-4	Know the Weak Topologies.
CO-5	Understand the Tychnoff's theorem and Ascoli's theorem.

Course Title	Paper V – Discrete Mathematics
Code	M105

CO No.	Course Outcomes
CO-1	Discussrelations, properties of binary relations in a set, Relation matrix and graph of a relation, partition and covering of a set, equivalence relations, compatibility relation, composition of binary relations.
CO-2	Discuss lattices as partially ordered sets, some properties of lattices, lattices as algebraic systems.
CO-3	ExplainBoolean algebra, sub algebra,direct product and homomorphism.
CO-4	Acquire the knowledge from Boolean forms and free Boolean algebras,values of Boolean expressions.
CO-5	Describe representations and minimizations of Boolean functions.
CO-6	Explain finite state machines, Introductory sequential circuits,equivalence of Finite State Machines.

SEMESTER II

Course Title	Paper I – Algebra- II
Code	M201

CO No.	Course Outcomes
CO-1	Discuss the definitions of Irreducible polynomials and Eisenstein criterion, Algebraic extensions and algebrically closed fields with it‟s examples.
CO-2	Explainsplitting fields and normal extensions, multiple roots, finite fields and Separable extensions.
CO-3	Simply explainfundamental theorem of Galois theory and fundamental theorem of algebra.
CO-4	Explain applications of Galois theory to classical problems.
CO-5	Solve the problems by using radicals, ruler and compass construction.

Course Title	Paper II – Real Analysis - II
Code	M202

CO No.	Course Outcomes
CO-1	Learn the definition and existence of the Riemann stieltjes Integral.
CO-2	Acquire the Knowledge of uniform convergence and uniform convergence & continuity and Integration.
CO-3	Apply the stone wierstrass theorem for obtain results von the function of algebra.
CO-4	understand the Linear Transformations and the contraction principle.
CO-5	Give seminars on the implicit function theorem ,the Rank theorem & Derivatives of higher order for improving subject.

Course Title	Paper III – Complex Analysis - I
Code	M203

CO No.	Course Outcomes
CO-1	Discussthe elementary properties and solved the examples of Analytic functions.
CO-2	Understand the mobius transformations.
CO-3	Know the fundamentals of Analytic functions,to studied Riemann Stieltjes integrals and Analyze Power Series representation of Analytic function.
CO-4	Learn the Cauchy's theorem and the homotopic version of Cauchy's theorem.
CO-5	Examine functions are analytic in a punctured disk.

Course Title	Paper IV – Linear Algebra
Code	M204

CO No.	Course Outcomes
CO-1	Explain elementary canonicalforms,annihilating polynomials,invariant subspaces.
CO-2	Discuss Simultaneous triangulation and simultaneous diagonalization.
CO-3	Describedirect –sum decompositions, invariant direct-sums.
CO-4	Discuss the primary decomposition theorem, cyclic subspaces and Annihilators. Learned cyclic decompositions and the rational forms.
CO-5	Acquire the knowledge in the Jordan forms, computation of invariant factors, semi simple operators.
CO-6	Discuss Bilinear forms, symmetric bilinear forms and skew symmetric Bilinear forms.

Course Title	**Paper V – Probability Theory and Statistics**
Code	**M205**

CO No.	**Course Outcomes**
CO-1	Discuss Sample spaces, events and the axioms of Probability.
CO-2	Learn some elementary theorems and Boole's inequality.
CO-3	Give brief explanation on Conditional probability and studied Bayes theorm.
CO-4	DiscussDescret and Continuous Random variables and studied Binomial, Poisson,Normal and uniform distributions.
CO-5	Learanmeaning of Correlation, Scatter diagram Karl person's coefficient of Correlation, Rank Correlation.
CO-6	Know types of sampling, parameters and solved some problems on tests of significance.

SEMESTER III

Course Title	Paper I – Functional Analysis
Code	M301

CO No.	Course Outcomes
CO-1	Learnlinear transformations, continuous linear transformations, Hahnbanach theorem in Banach spaces.
CO-2	Explainthe open mapping theorem and the conjugate of an operator.
CO-3	Discussthe definition and some simple properties in Hilbert spaces, orthogonal compliments and orthonormal sets.
CO-4	Describe the conjugate space, the adjoint of an operator, self-adjoint operators.
CO-5	Acquire the knowledge in normal and unitary operators and also in projections.
CO-6	Discussmatrices, determinants and the spectrum of an operator, the spectral theorem in Finite-Dimensional Spectral Theory.

Course Title	Paper II – Lebesgue Theory
Code	M302

CO No.	Course Outcomes
CO-1	Explainalgebra of sets, lebesgue measure, outer measure, measurable set and lebesgue measure.
CO-2	Discussnon- measurable set, measurable function, Little woods‟s three principles.
CO-3	Describe the Riemann integral, the lebesgue integral of a bounded function over a set of finite measures.
CO-4	Explain the integral of a non-negative function, the general lebesgue integral convergence in measure.

CO-5	Acquire the knowledge in differentiation of monotonic functions, functions of bounded variation,differentiation of an integral.
CO-6	LearnLp-spaces, the Holder‟s and Minkowski inequalities, convergence and completeness.

Course Title	**Paper III – Analytical Number Theory**
Code	**M303**
CO No.	**Course Outcomes**
CO-1	DiscussMobius function, Euler totient function and also explained relation between them.
CO-2	Learn theDirichlet inverse and Mobius inversion formula, mangoldt function and liouville's function.
CO-3	Describebig oh notation and Euler summation formula.
CO-4	Explain chebyshev's function,Shapiro's theorem and it‟s applications.
CO-5	Learnreduced residue system and Euler-Fermat theorem, Lagrange theorem and it‟s applications, Chinese remainder theorem and it‟s applications.

Course Title	**Paper IV – Partial Differential Equations**
Code	**M304**
CO No.	**Course Outcomes**
CO-1	Recall the basic concepts of Partial Differential Equations.
CO-2	Explainthe Pfafian Differential forms and equations and some excercises.
CO-3	Solve the problems on cauchy's Method of characteristics &compatiable system of first order equations.
CO-4	Know the Partial Differential Equations of the second order and solve the linear hyperbolic equations.
CO-5	understand the elementary solutions,and Method of separation of variables of solving Laplace equation and the wave equation.

Course Title	Paper V – Elective – ICommutative Algebra
Code	M305

CO No.	Course Outcomes
CO-1	Review the definition and elementary properties of rings.
CO-2	Discussthe prime and maximal ideals and explain the various elementary operations performed on ideals.
CO-3	Give the definition and elementary properties of modules and gave brief treatment of tensor products.
CO-4	Discusshow tensor products behave for exact sequences.
CO-5	To educate the definitions and simple properties of the formation of fractions.
CO-6	Discuss the decomposition of an ideal into Primary ideals and establish the uniqueness theorems.

SEMESTER IV

Course Title	**Paper I – Measure Theory**
Code	**M401**
CO No.	**Course Outcomes**
CO-1	Explain convergence and completeness in measure spaces.
CO-2	Discuss measurable functions, integration, general convergence theorems.
CO-3	Describe signed measures, the Raydon- Nikodym theorem, the LP spaces.
CO-4	Explain outer measures and measurability, the Extension theorem
CO-5	Discussthe Lebesgue- stieltjes integral, product measures.
CO-6	Acquire the knowledge in integral operators, inner measure, extension by sets of measure 0, caratheodory outer measure.

Course Title	**Paper II – Numerical Analysis**
Code	**M402**
CO No.	**Course Outcomes**
CO-1	Determine the roots of a polynomial equation and obtain the initial approximations to the roots by solved some problems in different methods.
CO-2	To find the roots of the equations by some of the iteration methods.

CO-3	Discuss the methods to construct the interpolating polynomials to a function and interpolate the indicated points.
CO-4	To evaluate the derivative of a function in the closed form by Numerical methods.

Course Title	**Paper III –Graph Theory**
Code	**M403**
CO No.	**Course Outcomes**
CO-1	Learnthe basic concepts of graphs and tress and fundamental circuits.
CO-2	Know the cutsets and connectivity and separability .
CO-3	Aquire the Knowledge of Planar graphs and Dual graphs.
CO-4	Explain the Matrix representation of graphs and Application to a switching network in real life.
CO-5	Describethe coloring,covering and Partitioning and further Operation Research.

Course Title	**Paper IV – Linear programming**
Code	**M404**
CO No.	**Course Outcomes**
CO-1	Discussthe formulation of linear programming problems, graphical solution and general solution of linear programming problem.
CO-2	Describesimplex method and two- phase method, Big- M method and to resolve degeneracy in linear programming problem, solved problems in simplex method.

CO-3	Explainthe concept of duality in linear programming and comparison of the solutions of the dual and primal.
CO-4	Learn the formulation of assignment problem, Reduction theorem and Hungarian assignment method, traveling salesman problems
CO-5	Explainformation of transportation problem, methods to find initial basic feasible solution and north- West corner rule, lowest cost entry method and Vogel‟s approximation method.
CO-6	Discuss optimality test, degeneracy in transportation problems and unbalanced transportation problem.

Course Title	**Paper V – Elective-II Discrete Dynamical Systems**
Code	**M405**
CO No.	**Course Outcomes**
CO-1	Discuss Phase portrait, periodic points and stable sets, differentibility and it‟s implications.
CO-2	Explainthe Sarkovskii‟stheorem and some basic problems.
CO-3	Learn the definitions of parameterized families of functions and bifurcations Cantor set's, symbolic dynamics and chaos.
CO-4	Describe topological Conjugacy, period doubling casade, Newton method.
CO-5	Solve the problems on Numerical solutions of differential equations on Newton‟s method in complex plane.

DEPARTMENT OF CHEMISTRY
PROGRAMME: M.Sc ORGANIC CHEMISTRY

PO No.	Programme Outcomes **Upon completion of the M.Sc Organic Chemistry Programme, the graduate will be able to**
PO-1	Determine the aromaticity of different compounds.
PO-2	Study of Asymmetric synthesis.
PO-3	Synthesis of Natural products and drugs by using proper mechanisms.
PO-4	Determine molecular structure by using UV, IR and NMR.
PO-5	Solve the reaction mechanisms and assign the final product.

PSO No.	Programme Specific Outcomes **Upon completion of these courses the student would**
PSO-1	Understand the various type of aliphatic, aromatic, nucleophilic substitution reaction.

PSO-2	Understand and apply principles of Organic Chemistry for understanding the scientific phenomenon in Reaction mechanisms.
PSO-3	Learn the Familiar name reactions and their reaction mechanisms.
PSO-4	Understand good laboratory practices and safety.
PSO-5	Study of free radical,bycyclic compound, conjugate addition of Enolates and pericyclic reactions.

Course Title	**Paper I – GENERAL CHEMISTRY-I**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	To learn about basic fundamentals of Quantum Chemistry and Molecular Spectroscopy.
CO-2	To learn about wave mechanics of simple systems with contact potential energy, particle in one dimensional box
CO-3	To learn about concepts of microwave and IR_spectroscopy
CO-4	To learn about Raman spectroscopy and electronic spectra of diatomic molecules

SEMESTER I

Course Title	**Paper II –INORGANIC CHEMISTRY-I**

Code	M.Sc OC
CO No.	**Course Outcomes**
CO-1	Acquire the knowledge on VSEPR,Valence bond and molecular orbital theories in explaining the structure of simple molecules
CO-2	Acquire the knowledge on preparation, structure and mechanisms of boranes,carboranes,metallocarboranes and cage componds
CO-3	To learn about crystal field theory, crystal field splitting pattern in different geometries and calculation of crystal field stabilization energy
CO-4	Acquire the knowledge on how to draw Orgel and Tanabe_Sugano diagrams for metal complexes

Course Title	Paper III – ORGANIC CHEMISTRY
Code	M.Sc OC
CO No.	**Course Outcomes**
CO-1	Acquire the knowledge on Nature of bonding in organic molecules and Aromaticity.
CO-2	To understand the Stereo Chemistry & Molecular representation of organic molecules.
CO-3	Acquire the knowledge of Heterocyclic compounds.
CO-4	To learn about Chemistry of some typical natural products (Alkaloids and Terpenoids).

Course Title	Paper IV – PHYSICAL CHEMISTRY-I
Code	M.Sc OC
CO	**Course Outcomes**

No.	
CO-1	Acquire knowledge on Thermodynamics
CO-2	Acquire knowledge on Micelles and Macro molecules
CO-3	Acquire knowledge on Chemical Kinetics
CO-4	Acquire knowledge on Photochemistry

Course Title	**Paper –I INORGANIC CHEMISTRY PRACTICAL**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	To Synthesis the inorganic complexes like (i) Tetraamminecopper(II) sulphate (ii) Potassium tris-oxalato ferrate(III) trihydrate (iii) Tris-thiourea copper(I) sulphate
CO-2	Hands on experience on Semi micro qualitative analysis of six radical mixtures Anions: CO32- , S2- , SO32- , Cl- , Br - , I - , NO3 - , SO4 2-, CH3COO - C2O42- , C4 H4 O6 2- , PO4 3- , CrO4 2-, AsO4 3-, F - , BO3 3- Cations : Ammonium (NH4+) 1st group: Hg, Ag, Pb, Tl, W 2nd group: Hg, Pb, Bi, Cu, Cd, As, Sb, Sn, Mo 3rd group: Fe, Al, Cr, Ce, Th, Ti, Zr, V, U, Be 4th group: Zn, Mn, Co, Ni 5th group: Ca, Ba, Sr 6th group: Mg, K, Li

Course Title	**Paper-I ORGANIC CHEMISTRY PRACTICALS**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	Hands on experience on Preparation, recrystallization, and determination of melting point & yield of the following compounds: (i) Aspirin, (ii) Nerolin, (iii) Chalcone, (iv) p-Nitro acetanilide, (v) 2,4,6- Tribromoaniline, (vi) m-Dinitrobenzene, (vii) Phthalimide, (viii) Diels-Alder adduct.

Course Title	Paper –I PHYSICAL CHEMSITRY PRACTICALS
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	Acquire practical knowledge on Determination of critical solution temperature of phenol-water system
CO-2	Acquire practical knowledge on Effect of added electrolyte on the CST of phenol-water system
CO-3	Acquire practical knowledge on Conductometric titration of Strong acid versus Strong base
CO-4	Acquire practical knowledge on Dissociation constant of weak acid (CH3COOH) by conductometric method
CO-5	Acquire practical knowledge on Conductometric titration of Weak acid vs Strong base.
CO-6	Acquire practical knowledge on Determination of cell constant
CO-7	Acquire practical knowledge on Adsorption of acetic acid on animal charcoal or silica gel
CO-8	Acquire practical knowledge on Acid-catalyzed hydrolysis of methyl acetate
CO-9	Acquire practical knowledge on Determination of partial molar volume of solute – H2O system by apparent molar volume method.

SEMESTER II

Course Title	Paper I – GENERAL CHEMISTRY-II
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	To learn about basic fundamental concepts of Quantum chemistry
CO-2	Acquire the knowledge on symmetry element, symmetry operation and point groups
CO-3	To learn about accuracy and precision in doing experiments, understands the different errors and methods for minimising errors
CO-4	To learn about introduction to computer programming_FORTRAN

Course Title	Paper II – INORGANIC CHEMISTRY-II
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	To learn about classification of clusters and different structural pattern of metal clusters
CO-2	Acquired knowledge on 16&18 electron rule ,bonding modes of CO,NO
CO-3	Acquire the knowledge on how to determine stability constant of particular complex through spectrophotometric and pH_metric method
CO-4	To learn about different types of electron transfer reaction and factors affecting them

Course Title	Paper III –ORGANIC CHEMISTRY-II
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	Acquire knowledge on Aliphatic Nucleophilic Substitution, Nucleophilic Aromatic substitution and Elimination Reactions.
CO-2	To understand Addition to Carbon – Carbon Multiple Bonds Reactions,Addition to Carbon – Hetero Multiple Bonds Reactions.
CO-3	To understand Types of molecular rearrangements, migratory aptitude.
CO-4	Acquire Basic principles and importance of UV, IR, NMR and Mass, Protection of carbonyl, Hydroxyl, carboxylic and Amine groups.

Course Title	Paper IV –PHYSICAL CHEMISTRY-II
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	To understand Physical methods of molecular structural elucidation.
CO-2	Acquire knowledge on Thermodynamics part –II and Statistical Thermodynamics.
CO-3	Acquire knowledge on Electrochemistry part-I
CO-4	Acquire knowledge on Electrochemistry part -II

Course Title	Paper –II INORGANIC CHEMISTRY PRACTICALS
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	To understand Volumetric Determination of Ferric iron by photochemical reduction
CO-2	To understand Volumetric Determination of Nickel by EDTA
CO-3	To understand Volumetric Determination of Calcium and Magnesium in a mixture by EDTA

CO-4	To understand Volumetric Determination of Ferrocyanide by Ceric sulphate
CO-5	To understand Volumetric Determination of Copper(II) in presence of iron(III)
CO-6	To understand Gravimetric Determination of Zinc as Zinc pyrophosphate
CO-7	To understand Gravimetric Determination of Nickel from a mixture of Copper and Nickel

CourseTitle	**Paper –II ORGANIC CHEMISTRY PRACTICALS**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	To understand Systematic qualitative analysis of an organic mixture containing two compounds Identification of method of separation and the functional group(s) present in each of them and preparation of one solid derivative for the conformation of each of the functional group(s).

Course Title	**Paper –II PHYSICAL CHEMISTRY PRACTICALS**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	Acquire knowledge on Distribution of iodine between CHCl3 and water
CO-2	Acquire knowledge on Distribution of I2 between CHCl3 and aq.KI solution-calculation of equilibrium constant.
CO-3	Acquire knowledge on Determination of Coordination number of cuprammonium cation.
CO-4	Acquire knowledge on Titration of Fe+2 Vs K2Cr2O7 – potentiometry
CO-5	Acquire knowledge on Titration of mixture Strong acid and weak acid versus Strong base by conductometry
CO-6	Acquire knowledge on Titration of Strong acid Vs Strong Base – pH – metry.
CO-7	Acquire knowledge on Titration of mixture of (NaHCO3 + Na2CO3) Vs HCl – pH- metry.
CO-8	Acquire knowledge on Titration of Strong acid Vs Strong Base using Quinhydrone electrode.
CO-9	Acquire knowledge on Verification of Beer-Lambert‟s law by Iron-thiocyanate system –colorimetry.
CO-10	Acquire knowledge on Determination of single electrode potential of Cu2+/Cu and estimate the given unknown concentration.

SEMESTER III

Course Title	Paper I –ORGANIC REACTION MECHANISMS-I and PERICYCLIC REACTIONS
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	To deep learning of Aliphatic Nucleophilic substitution and Aliphatic Electrophilic Substitution reactions.
CO-2	To understand Principles of asymmetric synthesis.
CO-3	Acquire knowledge on Molecular orbital symmetry, frontier orbitals of some compounds, classification of pericyclic reactions and Electrocyclic reactions.
CO-4	To understand FMO,PMOapproach for the explanation of sigma tropic rearrgements under thermal and photochemical conditions,sigmatropic rearrangements,sigmatropic rearrangements.

Course Title	Paper II –ORGANIC SPECTROSCOPY-I
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	To understand UV-Visible spectroscopy and it‟s applications.
CO-2	To understand Infrared spectroscopy and it‟s applications.
CO-3	To understandNuclear Magnetic Resonance Spectroscopy(1HNMR&13C NMR) and it‟s applications.
CO-4	To understand Mass spectrometry and it‟s applications.

Course Title	Paper III –MODERN ORGANIC SYNTHESIS-I
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	Acquire knowledge on Formation of C-C single bonds.
CO-2	Acquire knowledge on Formation of Carbon-Carbon double bonds.
CO-3	Acquire knowledge on Reactions of unactivated C-H bonds and organoboranes.
CO-4	Acquire knowledge on Protecting groups and simple applications of microwave and ultrasound assisted reactions.

Course Title	Paper IV –CHEMISTRY OF NATURAL PRODUCTS
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	Acquire knowledge onIntroduction, isolation, general methods of structure elucidation and physiological action, degradation, classification based on nitrogen heterocyclic ring, structure, stereochemistry, synthesis and biosynthesis ofAlkoloids.
CO-2	Acquire knowledge on Occurrence, isolation, general methods of structure determination, isoprene rule. Structure determination, stereochemistry, biosynthesis and synthesis ofTerpinoids.
CO-3	Acquire knowledge onOccurrence, isolation, general methods of structure determination, isoprene rule. Structure determination, stereochemistry, biosynthesis and synthesis of Steroids.
CO-4	Acquire knowledge onOccurrence, isolation, general methods of structure determination, isoprene rule. Structure determination, stereochemistry, biosynthesis and synthesis ofFlavonoids and Isoflavonoids.

Course Title	III SEMESTER Laboratory Course-1
Code	M.Sc OC
CO No.	Course Outcomes
CO-1	Multistep Synthesis of fallowing Organic Compounds Benzanilide from Benzophenone, Benzilic acid from benzoin, P-Bromo Aniline from Aniline, Symmetrical Tribromo Benzene from aniline, 2,4,6-trimethylquinoline from p-toluidine , Flavone from o-hydroxy acetophenone, 2-phenylindole from phenylhydrazine

Course Title	III SEMESTER Laboratory Course-1I
Code	M.Sc OC
CO No.	Course Outcomes
CO-1	To understand the Spectral Identification of Organic Compounds (UV, IR, 1H- and 13C- NMR, MASS).

SEMESTER IV

Course Title	Paper I – ORGANIC REACTION MECHANISMS-II and ORGANIC PHOTO CHEMISTRY
Code	M.Sc OC
CO No.	Course Outcomes
CO-1	Acquire knowledge on Free Radical Reactions,Quantitative relationships between Molecular structure and Chemical reactivity and Rearrangements.
CO-2	To understand knowledge on Methodologies in asymmetric synthesis.

CO-3	Acquire knowledge on Photochemical energy, Frank Condon Principle, Types of Electronic Excitation and Molecular orbital view of excitation, Jablonski Diagram, singlet and triplet states, dissipation of photochemical energy, photosensitization, quenching, quantum efficiency and quantum yield, Determination of Quantum yield and Photo Chemistry of Carbonyl Compounds.
CO-4	Acquire knowledge on different types of photo chemical rearrangement reactions.

Course Title	**Paper II –ORGANIC SPECTROSCOPY-II**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	Acquire knowledge on Optical Rotatory Dispersion and The octant rule-application in structural studies-α- halo keto rule.
CO-2	To understand Improving the PMR spectrum,Simplification of complex spectra,2D NMR spectroscopy.
CO-3	To understand how to deduce the structure of unknown compound by using fallowing spectral data (UV, IR, NMR (1H&13C) and mass spectrometry).
CO-4	To understandSeparation Techniques and Instrumental Techniques (GC,HPLC,XRD).

Course Title	**Paper III –MODERN ORGANIC SYNTHESIS-II**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	Acquire knowledge on OrganoSilanes and it‟sSynthetic applications.
CO-2	To understand properties and Synthetic applications of the oxidizing reagents in the oxidation of functional groups like alkenes, alkynes, alcohols, aldehydes and ketones.
CO-3	To understand different types of Catalytic reductions,properties and Synthetic applications of the Reducing reagents in the reduction of functional groups.
CO-4	Acquire knowledge on Retro Synthetic Analysis.

Course Title	Paper IV – BIO-ORGANIC CHEMISTRY
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	Acquire knowledge onBiopolymers and Enzymes.
CO-2	Acquire knowledge on Antimalarials& Antibiotics.
CO-3	Acquire knowledge onVitamins and Prostaglandins.
CO-4	Acquire knowledge onNucleic Acids.

Course Title	IV – SEMESTER Laboratory Course-1
Code	M.Sc OC

CO No.	Course Outcomes
CO-1	Acquire knowledge on Thin layer chromatography: Determination of purity of a given sample, monitoring the progress of chemical reactions, identification of unknown organic compounds by comparing the Rf values of known standards
CO-2	Acquire knowledge on Isolation and identification of Natural Products (a) Isolation of caffeine from tea leaves (b) Isolation of euginol from cloves (c) Isolation of casein and lactose from milk (d) Isolation of limonene from lemon peel (e) Isolation of

	piperines from black pepper (f) Isolation of lycopene from tomatoes (g) Isolation of β-carotene from carrots

Course Title	**IV – SEMESTER Laboratory Course-1I**
Code	**M.Sc OC**
CO No.	**Course Outcomes**
CO-1	Hands on experience on Estimation of (a) Glucose (b) Phenol (c) Aniline (d) Acetone (e) Aspirin (f) Ibuprofen (g) Paracetamol
CO-2	Acquire knowledge on Separation by column chromatography: Separation of a mixture of ortho and para nitroanilines using silicagel as adsorbent and chloroform as the eluent. The column chromatography should be monitored by TLC.

Department of Management Studies

BBA(SYNBBA219) - BACHELOR OF BUSINESS ADMINISTRATION

2019 Admitted Batch

P.Os, P.S.Os, C.Os

PROGRAMME OUTCOMES: On completion of the BBA Programm, the students will be able to:

- Develop managerial approach that provides career in the business and the corporate sector.
- Improve skills such as leadership, communication, critical thinking and decision making.
- Comprehend the business environment and improve ethical, social and environmental values.

PROGRAMME SPECIFIC OUTCOMES:

The BBA Programme has been designed to develop graduates with the following specific outcomes:

PSO1•**Critical Thinking Skills:** Students will be able to define, analyze, and devise solutions for structured and unstructured business problems and issues using cohesive and logical reasoning patterns for evaluating information, materials, and data.

PSO**2 Life Skills:** Students will be able to lead the teams by demonstrating life skills, coping skills and human values.

PSO3**Communication Skills:** Students will be able to conceptualize a complex issue into a coherent written statement and oral presentation.

PSO4**Technology Skills:** Students will become competent to use the technology in the modern organizational operations.

PSO5**.Entrepreneurship and Innovation:** Students will emerge as Entrepreneurs by creating and managing innovation, new businesses and high-growth potential entities.

PSO6**Business Knowledge:** Students will become technically competent in domestic and global business through the study of major disciplines within the fields of business. They become think tanks in global business solutions with a holistic approach.

COURSE OUTCOMES

I YEAR BBA: Semester-I

Paper-II: Management Process.

Course Outcomes:

Upon completion of this course, students will be able to:

- Gather knowledge about the principles of management which is essential for all kinds of people in all kinds of organizations.
- Develop a clear understanding of the managerial functions like planning, organizing, staffing, leading and controlling.

Paper-1: Managerial Economics.

Course Outcomes:

Upon completion of this course, students will be able to:

- Develop capacity to analyze the economic environments in which business entities operate.
- Understand how managerial decisions can vary under different constraints.

Paper-III: IT for Managers

Course Outcomes:

Upon completion of this course, students will be able to:

- Use and apply current technical concepts and practices in the core information technologies.
- Use Basic Microsoft Office Software Package with MS-Word, MS-PowerPoint, MS Access Excel.

I YEAR BBA : II SEMESTER

Paper-I: Accounting For Managers.

Course Outcomes:

Upon completion of this course, students will be able to:

- Acquire conceptual knowledge of basics of financial accounting.
- Understand the accounting practices of business enterprises.
- Demonstrate hands on skills in preparing Financial Statements of a Business enterprise.

Paper-II: Business Environment.

Course Outcomes:

Upon completion of this course, students will be able to:

- Gain knowledge regarding different dimensions of Business Environment and their impact on Business organizations.
- Understand Government Policies of India and their impact on Business Empires.

Paper-II: Quantitative Techniques for Management.

Course Outcome:

Upon completion of this course, students will be able to:

- Gain the basic knowledge of quantitative methods and their applications tocommercial situations.

II YEAR BBA : III SEMESTER

Paper-I: Operations Management.

Course Outcomes:

Upon completion of this course, students will be able to:

- Understand the concepts, principles, problems, and practices of Operations Management.
- Identify and articulate how Operations Management contributes to the achievement of an organization"s strategic objectives.

Paper-II:

Human Resource Management.
Course Outcomes:

Upon completion of this course, students will be able to:

- Acquire knowledge , process and techniques of HRM in an Organisation.
- Impart the skills to manage various functions of Human Resource Management in order to provide the professional approach and outlook.
-

Paper-III: Organisational Behavior.

Course Outcomes:

Upon completion of this course, students will be able to:

- Understand the behavior of people in the organizations.
- Comprehend the concepts of Personality, Perception, Attitudes,Values and Motivation of individuals in the Organisations..
- Understand the group dynamics and demonstrate Team building skills required for effective performance.

II YEAR BBA: IV SEMESTER

Paper-I: Financial Management.

Course Outcomes:

Upon completion of this course, students will be able to:

- Understand the functions and decisions of Financial Management of Business Organisation.
- Apply financial theory to analyze real life situations in an uncertain environment.

Paper-II: Marketing Management.

Course Outcomes:

Upon completion of this course, students will be able to:

- Develop an understanding of concepts and process of marketing Management.
- Analyse an organization‟s marketing policies and strategie**s.**

PAPER III: BUSINESS ETHICS AND CORPORATE GOVERNANCE

Course Outcomes:

Upon completion of this course, students will be able to:

- To understand and implement the Business Ethics in running the organizations..
- To implement various corporate social Responsibilities in the organizations.
- To Imbibe the ethical issues in the Corporate Governance and adhere to the ethicalcodes.

Skill Based Course : Business Leadership

Course Outcomes:

Upon completion of this course the students will be able to:

- Imbibe the traits and skill of leadership
- Understand the profiles of successful leaders

DSC 1 : E- Commerce

Course Outcomes:

Upon completion of this course, students will be able to:

- Understand the concepts and uses of electronic commerce in different areas of the economy
- Recognize the impact of Information and Communication technologies on the business operations.

DSC 2 : Business Laws

Course outcomes:

Upon completion of this course, students will be able to:

- Understand the basic legal concepts and the Indian legal environment
- Understand various Business Laws that need to be complied with in the business process.

DSC 3 : Taxation :

Course outcome:

Upon completion of this course, students will be able to:

- Understand the tax concepts and calculate Total Income & Tax Liability.
- Identify and explain the self-assessment system of tax administration.

Elective DSC 1F(FM) : Financial Markets

Course outcomes:

Upon completion of this course, students will be able to:

- Gain the knowledge of Primary & Secondary Markets and various Financial Services.
- Understand the functions and services of different Financial Institutions.

Elective DSC 2F(FM) – Foreign Exchange Management

Course Outcome:

Upon completion of this course, students will be able to:

- Identify the risks in the Foreign Exchange Management and the techniques to minimize the risk exposure.

Paper-VII : PROJECT WORK

Course outcomes:

Upon completion of this course, students will be able to:

- Gain knowledge of business practices and processes.
- Analyze, evaluate and interpret data practically for the situations at theindustry, business and individual levels

III YEAR BBA: SEMESTER VI

Paper-I : Event Management.

Course Outcomes:

Upon completion of this course, students will be able to:

- Obtain a sense of responsibility for the multi-disciplinary nature of event management
- Gain confidence and enjoyment from involvement in the dynamic industry ofevent management

Paper-II: Business Strategy.

Course outcomes:

Upon completion of this course, students will be able to:

- Understand the basics of the how organizations are managed, with a special focus on the role played by a business firm‟s strategy.
- Assess or predict business performance based on the detailed analysis ofa specific problem, case or company.

PAPER III:
MEDIUM, SMALL & MICRO ENTERPRISES MANAGEMENT

Upon completion of this course, students will be able to :

- Understand the structure and functioning of Medium, Small and Micro Enterprises.
- Setup own ventures and emerge as entrepreneurs

PAER IV : PROJECT EVALUATION AND MANAGEMENT

Upon completion of this course, students will be able to :

- Comprehend the project evaluation techniques
- Conduct project evaluation process

Elective – I(FM) : PAPER V - FINANCIAL SERVICES

Course outcomes:

Upon completion of this course, students will be able to:

- Understand the role and function of the financial system in reference to the macro economy.
- Demonstrate an awareness of the current structure and regulation of the Indian financial services sector.
- Evaluate and create strategies to promote financial products and services.

Elective – I(FM) : PAPER VI - INVESTMENT MANAGEMENT

Course Outcomes:

Upon completion of this course, students will be able to:

- Discuss core client groups of the investment management industry
- Describe the investment management process
- Detail relevant asset classes for investment
- Define performance metrics of investment funds
- Confidently communicate the definition of technical words and phrases foundwithin the investment management industry

BACHELOR OF COMPUTER APPLICATION (BCA)

PROGRAMME OUTCOME

At the end of the three year BCA programme the students will be able to:

- Understand, analyze and develop computer programs in the areas related to algorithm, web design and networking for efficient design of computer based system.
- Work in the IT sector as system engineer, software tester, junior programmer, web developer, system administrator, software developer etc.
- Apply standard software engineering practices and strategies in software project development using open source programming environment to deliver a quality of product for business success.

PROGRAM SPECIFIC OUTCOMES

- Equip themselves to potentially rich & employable field of computer applications.
- Pursue higher studies in the area of Computer Science/Applications.
- Take up self-employment in Indian & global software market.
- Meet the requirements of the Industrial standards.

COURSE OUTCOMES

SYLLABUS (2021-2022)

BATCH

SEMESTER I

PAPER C1: COMPUTER FUNDAMENTALS AND OFFICE TOOLS

On completion of the course the student should be able to:

- Describe the usage of computers and why computers are essential components in business and society.
- Identify categories of programs, system software and applications. Organize and work with files and folders.
- Compose, format and edit a word document and working with macros.
- Create work sheets and using various functions.
- Make presentations and inserting multimedia in them.

PAPER C2: PROGRAMMING IN C

Upon successful completion of this course, students will be able to-

- Understand the basic terminology used in computer programming.
- Write, compile and debug programs in C language.
- Use different data types in a computer program.
- Design programs involving decision structures, loops and functions.
- Understand the dynamics of memory by the use of pointers and Structures.
- Apply different operations in File handling.

PAPER C3: NUMERICAL AND STATISTICAL METHODS

- Skill to choose and apply appropriate numerical methods to obtain appropriate solutions todifficult mathematical problems.
- Ability to apply various statistical techniques such as Measures of Central Tendency and Dispersion.

- Understanding of relationship between variables using the method of Correlation and Fit Analysis.
- Skill to execute programs of various Numerical Methods and Statistical techniques for solvingmathematical problems.

SEMESTER II

PAPER C4: DATA STRUCTURES

After completing this course satisfactorily, a student will be able to:

1. Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and used by algorithms.
2. Describe common applications for arrays, records, linked structures, stacks, queues, trees, and graphs.
3. Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs
4. Demonstrate different methods for traversing trees
5. Compare alternative implementations of data structures with respect to performance
6. Compare and contrast the benefits of dynamic and static data structures implementations
7. Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack.
8. Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing.

PAPER C5: INTRODUCTION TO PYTHON PROGRAMMING

On the completion of this course, the student will be able to

- Understand the concepts of python programming
- Students should be able to develop logic for Problem Solving.
- Students should be able to apply the problem solving skills using syntactically simple language
- Create new GUI based programming to solve industry standard problems

PAPER C6: DATA BASE MANAGEMENT SYSTEM

On completing the subject, students will be able to:

1. Gain knowledge of Database and DBMS.
2. Understand the fundamental concepts of DBMS with special emphasis on relational data model.

3. Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database
4. Model database using ER Diagrams and design database schemas based on the model.
5. Create a small database using SQL.
6. Store, Retrieve data in database.

SEMESTER III

PAPER C7: ACCOUNTING AND FINANCIAL MANAGEMENT

On successful completion of the course, a student will be able to:

- Company Setup &Configurations.
- Recording Financial Transactions.
- Financial Reports Analysis.

PAPER C8: OBJECT ORIENTED PROGRAMMING THROUGH JAVA

The student would become competent enough to write, debug, and document well-structured java applications

- Demonstrate good object-oriented programming skills in Java
- Able to describe, recognize, apply and implement selected design patterns in Java
- Understand the capabilities and limitations of Java
- Be familiar with common errors in Java and its associated libraries
- Develop excellent debugging skills

PAPER C9: OPERATING SYSTEMS

The students will be able to:

1. Understand the main components and Structure of Operating System& their functions.
2. Analyze various ways of Process Management& CPU Scheduling Algorithms.
3. Evaluate various device and resources like Memory, Time and CPU Management techniques in distributed systems.
4. Apply different methods for Preventing Deadlocks in a Computer System.
5. Create and build an Application/Service over the UNIX operating system.

SEMESTER IV

PAPER C10: CYBER LAWS

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

- Critically evaluate ongoing developments in law relating to information technologies.
- Display an understanding of how these developments relate to one another.
- Examine areas of doctrinal and political debate surrounding rules and theories;
- Evaluate those rules and theories in terms of internal coherence and practical outcomes.
- Draw on the analysis and evaluation contained in primary and secondary sources.

PAPER C11: DATA MINING AND WARE HOUSING

At the end of the course, the student will demonstrate the following. The students will be able to:

- Examine the types of the data to be mined and present a general classification of tasks and primitives to integrate a data mining system.
- Apply preprocessing statistical methods for any given raw data
- Discover interesting patterns from large amounts of data to analyze and extract patterns to solveproblems, make predictions of outcomes
- Comprehend the roles that data mining plays in various fields and manipulate different datamining techniques
- Select and apply proper data mining algorithms to build analytical applications.
- Evaluate and implement a wide range of emerging and newly-adopted methodologies andtechnologies to facilitate the knowledge discovery.

PAPER C12: WEB PROGRAMMING

On successful completion of the course, a student will be able to:

- Use Building Blocks of PHP, Access array elements.
- Use various functions and handle data using files..
- Use working with Forms, Sessions, Cookies.
- Implement JavaScript.

PAPER C13: DATA COMMUNICATIONS & NETWORKING

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

1. Define computer networks, list network configurations, types, topologies, the applications ofcomputer networks in different fields, network models and description of physical layer.
2. Reason the need for flow and error control at the data link layer and explain the associatedprotocols.

3. Enumerate the shared channel access methods, associated protocols and Wired & Wireless LANstandards and implementations.
4. List the types of networking devices / equipments and also explain the addressing scheme used atthe network layer.
5. Explain how network layer, transport layer and application layer facilitates the transfer of messagefrom one node to another in a global network

PAPER C14: DATA ANALYTICS USING R

On successful completion of the course, a student will be able to:

- Data-Visualization tools and techniques offer executives and other knowledge workers new approaches to dramatically improve their ability to grasp information hiding in their data.
- Data visualization is a general term that describes any effort to help people understand the significance of data by placing it in a visual context.
- Patterns, trends and correlations that might go undetected in text-based data can be exposedand recognized easier with data visualization software.
- It isn't just the attraction of the huge range of statistical analyses afforded by R that attractsdata people to R. The language has also developed a rich ecosystem of charts, plots and visualizations over the years.
- ggplot2 is a data visualization package for the statistical programming language R.

PAPER C15 : OBJECT ORIENTED SOFTWARE ENGINEERING

On successful completion of the course, a student will be able to:

- To describe the three pillars of object-orientation methodologies and explain the benefits of each.
- To create use case documents that capture requirements for a software system.
- To create class diagrams that model both the domain model and design model of a softwaresystem.
- To create interaction diagrams that models the dynamic aspects of asoftware system.
- To understand the facets of the Unified Process approach to designing and building a softwaresystem.
- To build a model for the user interface (UI) of a software application

LIFE SKILLS
COURSE OUTCOMES
ANALYTICAL SKILLS

Course Outcomes: After completion of this course, the students will be able to:

CO1: Develop the basic concepts of arithmetic ability, quantitative ability, logical reasoning, business computations and data interpretation and obtain the associated skills. (K3)

CO2: Develop competency in the use of verbal reasoning. (K2)

CO3: Apply the skills and competencies acquired in the related areas. (K3)

CO4: Solve problems pertaining to quantitative ability, logical reasoning and verbal ability inside and outside the campus. (K3)

HUMNA VALUES AND PROFESSIONAL ETHICS (HVPE)

Course Outcomes:

CO1: Infer the significance of value inputs in a classroom and start applying them in their life and profession. (K2)

CO2: Distinguish between values and skills, happiness and accumulation of physical facilities the Self and the Body, Intention and Competence of an individual, etc. (K2)

CO3: Describe the value of harmonious relationship based on trust and respect in their life and profession. (K2)

CO4: Describe the role of a human being in ensuring harmony in society and nature. (K2)

CO5: Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work. (K2)

INFORMATION AND COMMUNICATION TECHNOLOGY – I (ICT)

Course Outcomes:

CO1: Explain the literature of social networks and their properties. (K2)

CO2: Explain which network is suitable for whom. (K2)

CO3: Develop skills to use various social networking sites like twitter, flickr, etc. (K3)

CO4: Explain few GOI digital initiatives in higher education. (K2)

CO5: Apply skills to use online forums, docs, spreadsheets, etc for communication, collaboration and research. (K3)

CO6: Get acquainted with internet threats and security mechanisms. (K3)

INTERNET FUNDAMENTALS AND WEB TOOLS – ICT II

Course Outcomes:

CO1: Explain the Fundamentals of Internet. (K3)

CO2: Demonstrate the applications of Internet. (K3)

CO3: Illustrate about E-mail. (K4)

CO4: Demonstrate web applications, web terminologies, web browsers, URL, search engines, etc. (K3)

CO5: Illustrate structure of HTML document. (K3)

ENVIRONMENTAL STUDIES

Course Outcomes:

CO1: Explain the importance of natural resources like forest resources, water resources, mineral resources, food resources, energy resources and land resources.(3)

CO2: Illustrate eco-systems, bio diversity and its conservation. (K4)

CO3: Illustrate environmental pollution like air pollution, water pollution, soil pollution and noise pollution. (K4) Explain the importance of solid waste management. (K3) Explain disaster management. (K3)

CO4: Illustrate social issues and environment protection act. (K4)

CO5: Describe population explosion and its impact on environment. (K2)
CO6: Explain the role of Information Technology in environment and human health. (K3)

COMMUNICATION SKILLS AND SOFT SKILLS – I

Course Outcomes:
CO1: Develop vocabulary building. (K3)
CO2: Explain basic grammar rules. (K3)
CO3: Explain Advanced grammar rules. (K3)
CO4: Practice Listening Skills. (K3)
CO5: Practice Reading Skills. (K3)

COMMUNICATION SKILLS AND SOFT SKILLS – II

Course Outcomes:
CO1: Practice the sounds of English. (K3)
CO2: Practice accent and intonation. (K3)
CO3: Facilitate conversation skills, interview skills, presentation skills and public speaking skills. (K6)
CO4: Dramatize role play. (K3)
Develop articulating and debating skills. (K5K6)
Practice group discussion. (K3)
CO5: Develop writing skills. (K3)

COMMUNICATION AND SOFT SKILLS – III

Course Outcomes:
CO1: Develop soft skills like positive attitude, body language, SWOT/SWOC analysis, emotional intelligence, etiquette. (K6)
CO2: Demonstrate paragraph writing. (K3)
CO3: Produce paraphrasing and summarizing techniques. (K6)
CO4: Develop formal and informal letter writing and illustrate E-Correspondence.(K3)
CO5: Prepare resume and curriculum vitae and covering letters. (K6)

ENTREPRENEURSHIP

Course Outcomes:
CO1: Classify entrepreneurships and explain the characteristics of Entrepreneur. (K3,K4)
CO2: Develop methods for idea generation and make opportunity assessment. (K6)
CO3: Develop project formulation and prepare project report. (K6)
CO4: Illustrate Institution supporting small business enterprises. (K4)
CO5: Explain the Government policy and taxation benefits. (K3)

LEADERSHIP EDUCATION

Course Outcomes:
CO1: Apply numerical methods for approximating the solution of problems of continuous mathematics. (K3)
CO2: Analyze the error incumbent in any such numerical approximation. (K4)
CO3: Apply a variety of numerical algorithms using appropriate technology. (K3)
CO4: Compare the viability of different approaches to the numerical solution of problems arising in roots of solution of non-linear equations, interpolation and approximation, numerical differentiation and integration, solution of linear systems. (K4)

SKILL DEVELOPMENT COURSES

DISASTER MANAGEMENT

Course Outcomes: After successful completion of the course, the students are able to:
CO1: Explain the nature, cause and effects of disasters.(K2)
CO2: Explain the importance of Disaster Management and the need of awareness. (K3)
CO3: Develop knowledge on disaster preparedness, recovery remedial measures and

personal precautions.

CO4: Associate himself/herself in pre and post disaster management service activities. (K3)

ELECTRICAL APPLIANCES

Course Outcomes: By successful completion of the course, students will be able to:

CO1: Develop necessary skills/hand on experience/ working knowledge on multimeters, galvanometers, ammeters, voltmeters, ac/dc generators, motors, transformers, single phase and three phase connections, basics of electrical wiring with electrical protection devices. (K3)

CO2: Explain the working principles of different household domestic appliances. (K3)

CO3: Analyze the electrical connections at house-hold but will also learn the skill to repair the electrical appliances for the general troubleshoots and wiring faults. (K4)