AG & SG Siddhartha Degree College of Arts & Science (Autonomous), Vuyyuru

PROGRAM OUTCOMES

Department of BOTANY

PO's of B.Sc. BZC

PO 1: Effective citizenship: Ready students for higher studies on a wide base of inter-related subjects towards the social awareness.

PO 2: Practical Knowledge: students with the necessary experience to correlate theory with practical aspects

PO 3: Problem analysis: Identify the taxonomic position of plants, and analyze non reported plants with substantiated conclusions using first principles and methods of nomenclature and classification in Botany.

PO4: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern instruments and equipments for Molecular Biology, Biotechnology, Plant Tissue culture experiments of plants with an understanding of the application and limitations.

PO5: The Botanist and society: Apply reasoning informed by the knowledge to assess plant diversity, its importance for society, health, safety, legal and environmental issues and the consequent responsibilities relevant to the biodiversity conservation practice.

PO6: Scientific Knowledge: Apply the knowledge of basic science, life sciences and fundamental process of plants to study and analyze any plant form.

PO: 7 Ethics: Apply ethical principles and commit to environmental ethics and responsibilities and norms of the biodiversity conservation.

PROGRAM SPECIFIC OUTCOMES (PSO'S)

FOR B.Sc. (BZC)

PSO1: Understand the diversity to know the systematic position, morphology, structure and life cycle pattern of Algae, useful and harmful activities of Algae. Know the Economic Importance of Fungi, and the morphological diversity of Bryophytes.

PSO2: Understand the diversity of Gymnosperms, to know the evolutionary trends and affinities of living gymnosperms with respect to external and internal features and the conceptual development of taxonomy and systematic, and trends in classification. Know the floral variations in angiospermic families, their phylogeny and evolution. Understand various rules, principles and recommendations of plant nomenclature produces in plant identification.

PSO3: Understand the Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity unity of life with the rich diversity of organisms and their ecological and evolutionary significance. learn about conservation of biodiversity, vegetation types of andhrapradesh.

PSO4: Able to understand importance and scope of plant physiology, plant cells in relation to water, process of photosynthesis in higher plants with particular emphasis on light and dark reactions, C3 and C4 pathways and respiration in higher plants with particular emphasis on aerobic and anaerobic respiration.

PSO5: Able to understand the eukaryotic cell, Structure and organization of cell membrane and Mendelian genetics, experimental evidences to prove DNA as a genetic material. Get the detail knowledge about modern strategies applied in Plant Breeding for crop improvement i.e. Mass selection, Pureline Selection and Clonal selection.

PSO6: Acquire basic knowledge and experimental skills in Biotechnology and, tissue culture, necessary for scientific investigation.

PSO7 Enable self-employment with knowledge and skills in certain applied branches like mushroom cultivation.

PSO8: Apply the theoretical knowledge gained during the program to the actual practice of laboratory plant science.

PSO9: Use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth.

DEPARTMENT OF UG CHEMISTRY

PROGRAM OUTCOMES (PO's) of CHEMISTRY

PROGRAM OUTCOMES

A.G& S.G. Siddhartha Degree College of Arts & Science, Vuyyuru(Autonomous)

Department of Chemistry

Name of the programme:B.Sc (MPC,MCCs, BZC and ABC)

Program outcomes:

On completion of the course, student will able to

PO1: Critical Thinking: Provide a broad foundation in chemistry that stresses scientific reasoning and Analytical problem solving with a molecular perspective.

PO2: Effective Communication: Provide students with the skills required to succeed in graduate school, the chemical industry or professional school.

PO3: Social interaction: To expose the students to a breadth of experimental techniques using modern instrumentation.

PO4: Effective Citizenship: The student will understand the importance of the Periodic Table of the Elements, how it came to be, and its role in organizing chemical information.

PO5: Ethics: The student will learn the laboratory skills needed to design, safely conduct and interpret chemical research.

PO6: Environment and Sustainability: The student will acquire a foundation of chemistry of sufficient breadth and depth to enable them to understand and critically interpret the primary chemical literature.

PO7: Self-directed and lifelong learning: The student will learn professionalism, including the ability to work in teams and apply basic ethical principles.

Program Specific Outcomes:

Name of the programme:B.Sc (MPC,MCCs, BZC and ABC)

PSO1: The student will understand the interdisciplinary nature of chemistry and to integrate knowledge of mathematics, physics and other disciplines to a wide variety of chemical problems.

PSO2: The student will develop the ability to effectively communicate scientific information and research results in written and oral formats.

PSO3: To encourage the students for higher education.

DEPARTMENT OF PG CHEMISTRY

PROGRAM OUTCOMES (PO's) of M.Sc.ORGANIC CHEMISTRY

PROGRAM OUTCOMES:-

At the end of the program, the student will be able to

PO1: Critical Thinking: Think critically and analyze chemical problems related to Inorganic, Organic, Physical and Analytical.

PO2: Effective Communication: Understand the need for scientific communication in both written & oral forms and as well as the role of computers and software in solving problems related to chemistry and can use modern library tools to locate and retrieve scientific information about a topic, chemical or technique relating to chemistry.

PO3: Social Interaction: Function individually and as a member or leader in team with the fundamental and advanced knowledge gained in the field of chemistry and other allied fields.

PO4: Effective Citizenship: Apply conceptual knowledge gained in the field of chemistry to assess social, health, safety, legal and cultural issues and the relevant consequences of it.

PO5: Ethics: Record and analyze the experimental results by maintaining professional ethics, responsibilities and norms of the scientific practices.

PO6: Environment and sustainability: Understand the issues of environmental pollution and sustainable development.

PO7: Self directed & lifelong learning: Engage in independent and lifelong learning of the concepts related to chemistry in broadest context of socio-technological changes.

PROGRAM SPECIFIC OUTCOMES:-

After successful completion of the programme, the graduate will be able all to acquire

PSO1: Self motivation towards global level research opportunities to pursue Ph.D Programme Agreed approach of CSIR – NET examination.

PSO2: Required skill to have specific placement in R&D, pharmaceutical Industry and allied Divisions.

PSO3: Required knowledge to clear discipline specific competitive exams conducted by service Commission and other organizations.

Department of Commerce
Programme: B.com Computers.,

Programme outcomes (Pos)

PO1. Critical Thinking: Knowledgeable in the core disciplines of Commerce, Economics and Business through a number of specializations and practical exposure enables them to face the challenges in the field of Commerce

PO2. Effective Communication: Demonstrate proficiency in communicating competently in groups and organizations in English and in one Indian language,

.

PO3. Effective Citizenship: Ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO4.Value- based development: Recognize values such as justice, trust, equity, fairness, kindness and, understand the moral Dimensions of your decisions, and accept responsibility for them.

PO5. Environment and Sustainability: Understand the issues of environmental contexts and Sustainable development.

PO6. Self-directed and Life-long Learning: promoting continuous development and improvement of the knowledge and skills needed for employment and personal fulfilment

Programme Specific Outcomes (PSO)

PSO1. Getting the knowledge and the importance of accounting and auditing Standards for the reliability of financial statements.

PSO2. Interpret the legal and environmental aspects of business and Analyze quantitative data in order to take business decisions

PSO3. Empowering the student to understand the accounting practices and
Procedures followed by different business entities.

PSO4. Promising the Practical skills for a bright career as accounting officers, computer professionals, audit assistants, businessmen, entrepreneurs, managers with required knowledge in computers.

PSO5. Knowledge of major theories and models in key areas which motivate them to pursue higher studies / face competitive exams like SSC,P.C,BANK,R.R.B/ professional courses like CA,CS, ICWA and other courses.

Programme: B.com General

Programme outcomes (Pos)

PO1. Critical Thinking: Knowledgeable in the core disciplines of Commerce, Economics and Business through a number of specializations and practical exposure enables them to face the challenges in the field of Commerce

PO2. Effective Communication: Demonstrate proficiency in communicating competently in groups and organizations in English and in one Indian language,

.

PO3. Effective Citizenship: Ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO4.Value- based development: Recognize values such as justice, trust, equity, fairness, kindness and, understand the moral Dimensions of your decisions, and accept responsibility for them.

PO5. Environment and Sustainability: Understand the issues of environmental contexts and Sustainable development.

PO6. Self-directed and Life-long Learning: promoting continuous development and improvement of the knowledge and skills needed for employment and personal fulfilment

Programme Specific Outcomes (PSO)

PSO1. Getting the knowledge and the importance of accounting and auditing Standards for the reliability of financial statements.

PSO2. Interpret the legal and environmental aspects of business and Analyze quantitative data in order to take business decisions

PSO3. Empowering the student to understand the accounting practices and Procedures followed by different business entities.

PSO4. Promising the Practical skills for a bright career as accounting officers, computer professionals, audit assistants, businessmen, entrepreneurs, managers with required knowledge in computers.

PSO5. Knowledge of major theories and models in key areas which motivate them to pursue higher studies / face competitive exams like SSC,P.C,BANK,R.R.B/ professional courses like CA,CS, ICWA and other courses.

Programme: B.com E-Commerce

Programme outcomes (Pos)

PO1. Critical Thinking: Knowledgeable in the core disciplines of Commerce, Economics and Business through a number of specializations and practical exposure enables them to face the challenges in the field of Commerce

PO2. Effective Communication: Demonstrate proficiency in communicating competently in groups and organizations in English and in one Indian language,

.

PO3. Effective Citizenship: Ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO4.Value- based development: Recognize values such as justice, trust, equity, fairness, kindness and, understand the moral Dimensions of your decisions, and accept responsibility for them.

PO5. Environment and Sustainability: Understand the issues of environmental contexts and Sustainable development.

PO6. Self-directed and Life-long Learning: promoting continuous development and improvement of the knowledge and skills needed for employment and personal fulfilment

Programme Specific Outcomes (PSO)

PSO1. Getting the knowledge and the importance of accounting and auditing Standards for the reliability of financial statements.

PSO2. Interpret the legal and environmental aspects of business and Analyze quantitative data in order to take business decisions

PSO3. Empowering the student to understand the accounting practices and
Procedures followed by different business entities.

PSO4. Promising the Practical skills for a bright career as accounting officers, computer professionals, audit assistants, businessmen, entrepreneurs, managers with required knowledge in computers.

PSO5. Knowledge of major theories and models in key areas which motivate them to pursue higher studies / face competitive exams like SSC,P.C,BANK,R.R.B/ professional courses like CA,CS, ICWA and other courses.

DEPARTMENT OF UG COMPUTERSCIENCE

PROGRAMME OUTCOMES (POS) On successful completion of Graduate Program, Graduating Students/ Graduates will be able to

PO 1: Provide students with fundamental knowledge and ability to expertise in Computer Science.

PO 2 : Provide insight to problem solving to succeed in Technical Profession through precise education and to prepare students to excel in postgraduate programs.

PO 3: To inculcate in students professional, effective communication skills, team work, multidisciplinary approach and an ability to relate issues to broader social context.

PO 4: Prepare students to be aware of excellence, leadership, written ethical codes and guidelines and lifelong learning needed for successful professional career by providing them with an excellent academic environment.

PO 5: Empower the students in academic, social, psychological and economic arenas by developing relevant competencies.

PO 6: Interpret and apply the implications of environment awareness initiatives incorporated in curriculum.

PO 7: Participation and contribution to community development activities through NCC, NSS etc.

PO 8: Acquire sufficient knowledge base in the Domain Specific area leading to the pursuit of advanced level of study in the chosen Domain Specific area.

PO 9: Adaptability and capacity building to the ever changing needs of the industry and employment opportunities.

PO 10: Inculcate the human values through curricular, co-curricular and extracurricular activities.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

The Department of Computer Science, A.G &S.G Siddhartha Degree College of Arts & Science, Vuyyuru, offers Three Year (comprising 6 semesters) Undergraduate Program in Computer Science with objective of empowering students to acquire all-inclusive understanding of Computer Knowledge both theoretical and practical as an academic discipline. Upon completion of B. Sc.Computer Science Degree Program successfully, the students shall acquire the following skills and competencies.

PSO 1 Ability to apply foundations of Mathematics, Principles of Physics/Statistics and Theory of Computer Science in solving the real-world problems.

PSO 2 Identify, formulate, review research literature, and analyzes complex problems reaching substantiated conclusions using first principles of mathematics and Computer science.

PSO 3 Design solutions for complex problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PSO 4 Create, select, and apply appropriate techniques, resources, and modern IT tools including prediction and modelling to complex activities with an understanding of the limitations.

PSO 5 Understand the impact of the professional solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PSO 6 Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PSO 7 Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

DEPARTMENT OF PG COMPUTER SCIENCE

Program Educational Objectives

PEO1. Technical Expertise and Knowledge in Multiple Domains: Ability to develop an understanding of modern computing concepts and architectures from a design and performance perspective of various domains.

PE02. Assessment from System Level Perspective: Able to analyse and appreciate the structure of computer systems and the processes involved in their construction at various levels of detail and abstraction.

PEO3. CriticalThinking,Business Analytics &Problem Solving and Innovation: An ability to apply knowledge of mathematics and computer science practices to build Innovative Public & Private Sector Applications involving complex computing problem solving and in research.

PEO4.ProfessionalEthics&SocialResponsibility: Ability to apply and commit to professional ethics following cyber regulations in a global economic environment. Create and design innovative applications to solve complex problems using established practices for the betterment of the society.

PEO5. AppositetoIndustry: Gain exposure to multiple programming languages, tools, paradigms, and technologies as well as the fundamental underlying principles throughout their education there by making them the right choice for industry positions.

PEO6. Effective Communication & Leadership: Ability to communicate effectively and present technical &project management information using audiovisual tools as well as in oral and written reports. Rise up to the need and be able to lead teams of individuals.

PEO7. Life-long Learning and Research: Understand the importance of, and possess pre-requisite skill set to undertake lifelong independent learning and research in the content of contemporary technological advancements.

Program Specific Objectives for M.Sc.(Computer Science) Programme

PSO1. To make the students industry ready as far as possible to enhance their employability in the industries.

PSO2. Create an ambience of education through faculty training, self learning, sound academic practices and

Research endeavours.

DEPARTMENT OF ECONOMICS

Program Outcomes of BA

PROGRAM OUTCOMES

Programme Outcomes

After the completion of the B. A. (H.E.P.)Programme, the students will be able to achieve the following outcomes:

PO1. Critical Thinking:

Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational and personal) from different perspectives.

PO2. Effective Communication:

Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and by connecting people, ideas, books, media and technology across the World.

PO3. Social Interaction:

Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4. Effective Citizenship:

Demonstrate empathetic social concern and equity-centered national development, and the ability to act with an informed awareness of issues and Participate in civic life through volunteering.

PO5. Ethics:

Recognize different value systems including that of own, understand the moral dimensions of our decisions, and accept responsibility for them.

PO6. Environment and Sustainability:

Understand the issues in the contexts of environmental and sustainable development.

PO7. Self-directed and Life-long Learning:

Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

Programme Specific Outcomes (PSO)

After completion of Economics programme, the students will be in a position to take informed decisions with regard to the following:

PSO1 - How the consumers and producers will take rational decisions in the context of unlimited needs and availability of scarce resources;

PSO2 – How the economy at the aggregate level works, what are the determinants of national income, prices, demand for and supply of money, poverty, and unemployment in an economy;

PS03 - He/she Gets understanding of the process of economic growth, economic development, sustainable growth in the context of existence of trade-off between rapid economic growth and environmental sustainability in the longrun;

PS04 - He/she will be able to apply the determinants of economic growth and Development to the economies of India and Andhra Pradesh and appraise the fiscal, monetary and other socio-economic policies being pursued in India and Andhra Pradesh

PSO5 – He/she will get a basic understanding of Statistical Methods with a view to applying them to economics and real life situations

DEPARTMENT OF HISTORY

PROGRAM OUTCOMES

Programme Outcomes

Programme Outcomes Upon completion of BA Degree Programme with History combination the graduates will be able to:

PO-1 Student will be able to acquire historical knowledge, depth in terms of content and chronology of contents.

PO-2 Student will be able to distinguish between Primary and Secondary Sources to study of history and understand how to make use of them.

PO-3 Student should possess effective communication skills to deliver presentations to a variety of audiences.

PO-4 Student should understand the basic skills and tools of historical writings and analysis.

PO-5 Students apply a biblical philosophy of history to their analysis of social, political, religious, cultural, economic issues.

PO-6 Student should recognise values and ethical standards in every walk of life

Programme Specific Outcomes

Programme Specific Outcomes Upon completion of BA Degree Programme with History combination the graduates will be able to:

PSO-1 To understand the History of People and societies like religious, customs institution Administration.

PSO-2 To create an awareness of different political cultural social and economic structures in the past and their Interrelationship.

PSO-3 Analyze relationship between the past and the present is lively presented in the history.

PSO-4 To prepare students for future study employability and responsible citizenship.

a) Further study-post graduate in history, B.Ed, M.Phil, Ph.D

b) Employability – Archaeologists, Historians, UPSC- jobs APPSC-Jobs, Teachers, NGO's Travel and Tourism experts.

PSO-5 To develop interest in the study of History and activities, skills relating to history.

a) Draw historical Maps, Charts

b) Collect ancient arts, coins

c) Visit Archaeological sites, Museums, archives and Historical important places.

d) To take active role in activities of historical organizations.

PSO-6 Empowering students in the historical research and to write articles on historical topics.

PSO-7 Inculcate moral and ethical values among students.

PSO-8 To install the feeling of patriotism among the students.

PSO-9 To orient student to become perfect social being.

DEPARTMENT OF MATHEMATICS

Program Outcomes of B.Sc.MPC, MPCs, MCCs, MSCs

PROGRAM OUTCOMES

PO1 Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO2 Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO3 Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO4 Environment and Sustainability: Understand the issues of environmental contexts and sustainable development

PO5Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PROGRAM SPECIFIC OUTCOMES(PSO'S)

Of B.Sc students

At the Completion of B.Sc. in Mathematics the students are able to:

PSO1	To increase the skills in different branches of Mathematics and increase Mathematical abilities in learning Mathematics.
PSO2	To increase the capability in learning Mathematics and increase the ideas in understanding the proofs.
PSO3	To facilitate students to appreciate the technique of formal proof (unique aspect of this discipline) in establishing facts through procedural, valid and logical reasoning.
PSO4	To familiarize students with the universal language of Mathematics precise in symbolic vocabulary, abstractions, generalizations and conventions.
PSO5	To enhance the Mathematical maturity in them with in depth of knowledge in pure and applied branches of Mathematics.
PSO6	To encourage students to become techno savvy with a perception widened by Mathematics.

DEPARTMENT OF POLITICAL SCIENCE

PROGRAM OUTCOMES

Programme Outcomes

Programme Outcomes Upon Completion of BA Degree Programme with Political Science Combination the Graduates will be able to:

PO-1 Understand the world, their country, their society, as well as themselves and develop the ability of reflective thinking and reasoning

PO-2 Get awareness of ethical problems, social rights, values and responsibility

PO-3 Take individual and team responsibility as a member or a leader of a team and have the skills to work effectively.

PO-4 Student will be able to understand the basic tools of analysis such as analysis of social, political, religious, cultural and economic issues.

PO-5 Prepare Students to recognise values and ethical standards in every walk of life

PO-6 Develop the ability to make logical inferences about social and political issues on the basis of comparative knowledge

PO-7 Create the feeling of patriotism among the students and sense of belongingness of the society they live in

PO-8 Exposed to the Knowledge of philosophical underpinnings of modern politics , government and the legal principles

PO-9 Prepare students for a variety of careers and professions in fields such as law, government, education, politics, policy, and business.

Programme Specific Outcomes :

Programme Specific Outcomes Upon Completion of BA Degree Programme with Political Science Combination the Graduates will be able to:

PSO-1 Be able to describe and explain political theory, political systems around the world, and politics in the international arena,

PSO-2 To create an awareness of different political ,social and economic cultures in the past and their Interrelationship.

PSO-3 Identify the principal arguments for and against alternative forms of government and evaluate alternative political ideas and ideologies

PSO-4 Understand basic political and governmental structures, processes, and policies and operation of the system.

PSO-5 Able to explain the role of political ideas, value conflicts, and ideology in human societies.

PSO-6 Critically assess the actions of the political process and determine their motives

PSO-7 Understand the foundations of Indian government, including the structure and relationships between the branches of government

PSO-8 Know how laws are made, policies are developed, programs implemented, and what influences and constraints are placed upon the process

PSO-9 Inculcate moral and ethical values among students to become a responsible citizens

Department of Physics

Programme Outcome

PO1: **Critical Thinking**: Physics deals with a wide variety of systems, certain theories are used by all physicists.

PO2: **Effective Communication:** Each of these theories were experimentally tested numerous times and found to be an adequate approximation of nature.

PO3: **Effective Citizenship**: Physics uses mathematics to organize and formulate experimental results.

PO4: **Value- based development**: From those results, precise or estimated solutions, quantitative results from which new predictions can be made and experimentally confirmed or negated.

PO5: **Ethics:** After successful completion of three year degree program in physics a student should be able to; Demonstrate, solve and develop an understanding of major concepts in all disciplines.

PO6: **Environment and Sustainability**: Solve the problem and also think methodically, independently and draw a logical conclusion.

PO7: **Self-directed and Life-long Learning:** Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Physics experiments. Create an awareness of the impact of Physics on the society, and development outside the scientific community.

Programme Specific Outcome

PSO1:The theory of mechanics (it is a branch of physics) accurately describes the motion of objects, provided they are much larger than atoms and moving at much less than the speed of light.

PSO2: These theories continue to be areas of active research today.

PSO3: The student will gain the knowledge of Physics through theory and practical's.

PSO4: The student will understand good laboratory practices and safety.

PSO5: The student will develop research oriented skills

Department of Zoology

PROGRAM OUTCOMES

PO's of B.Sc. BZC

PO1 Critical thinking: Able to understand and utilize the principles of scientific enquiry, think analytically, clearly and evaluate critically while solving problems and making decisions during biological study.

PO2 Effective communication: Able to formally communicate Scientific ideas and investigations of the biology discipline to othersusing both oral and written communication skills.

PO3 Social interaction: Able to develop individual behaviour and influence society and social structure.

PO4 Effective citizenship: Able to work with a sense of responsibility towards social awareness and follow the ethical standards in the society.

PO5 Ethics: Ability to demonstrate and discuss ethical conduct in scientific activities.

PO6 Environment and Sustainability: Able to understand the impact of biological science in societal and environmental contexts and demonstrate the knowledge for sustainable development.

PO7 Self-directed and life-long learning: Able to recognize the need of life-long learning and engage in research and self-education.

PROGRAM SPECIFIC OUTCOMES (PSO'S) FOR B.Sc. (BZC)

PSO1: Understand the nature and basic concepts of chordates, non-chordates, Cell biology, Evolution, Genetics, Embryology, Physiology, Ecology and applications of Biotechnology and Immunology

PSO2: Identify the major groups of organisms, be able to classify them within a phytogenic framework, compare and contrast the characteristics of animals that differentiate them from other forms of life.

PSO3: Understand the unity of life with the rich diversity of organisms and their ecological and evolutionary significance

PSO4: Use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth.

PSO5: Explicate the ecological interconnectedness of life on earth by tracing energy and nutrient flows through the environment. They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.

PSO6: Acquire basic knowledge and experimental skills in Biotechnology and immunology, necessary for scientific investigation.

PSO7: Provide knowledge and skills in aquaculture systems, how they work, and how to best manage them as there is a need for qualified and professional people to work in the aquaculture industry.

PSO8: Apply the theoretical knowledge gained during the program to the actual practice of laboratory animal science.

PSO9: Enable self-employment with knowledge and skills in certain applied branches like Aquaculture, Poultry and Biotechnology.

PROGRAMOUTCOMES (PO's) of B.Sc. Aquaculture

PO1 Critical thinking: Able to understand and utilize the principles of scientific enquiry, think analytically, clearly and evaluate critically while solving problems and making decisions during aquacultural study.

PO2 Effective communication: Able to formally communicate Scientific ideas and investigations of the biology discipline to othersusing both oral and written communication skills.

PO3 Social interaction: Able to develop individual behaviourandinfluence society and social structure.

PO4 Effective citizenship: Able to work with a sense of responsibility towards social awareness and follow the ethical standards in the society.

PO5Ethics: Ability to demonstrate and discuss ethical conduct in scientific activities.

PO6 Environment and Sustainability: Able to understand the impact of biological science in societal and environmental contexts and demonstrate the knowledge for sustainable development.

PO7 Self-directed and life-long learning: Able to recognize the need of life-long learning and engage in research and self-education.

Programme specific outcomes

On completion of their degree, students will have developed a comprehensive and well-founded knowledge in aquaculture and a range of transferable professional skills.

PSO1 Demonstrate a sound understanding of the biology of aquaculture organisms and of breeding, genetics, nutrition and water quality issues relevant to aquaculture

PSO2 Design aquaculture systems and solve engineering issues in aquaculture

PSO3 Employ knowledge of health and safety issues in aquaculture

PSO4 Employ scientific techniques, practical skills, critical analysis of data and business management strategies to improve aquatic resource management.

PSO5 Understand and interpret critical scientific and ethical issues in aquaculture

PSO6 Engage effectively with information and communication technologies

PSO7 Demonstrate research skills appropriate for further study and employment. Appreciate the need for continuing professional development.

COURSE OUTCOMES OF ALL DEPARTMENTS

AG & SG Siddhartha Degree College of Arts & Science (Autonomous), Vuyyuru

Department of Botany

SEMESTER –I

TITLE OF THE COURSE: FUNDAMENTALS OF MICROBES AND NON VASCULAR PLANTS

COURSE CODE: BOTT11A

COURSE OUTCOMES

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

CO1: Explain origin of life on the earth.

CO2: Illustrate diversity among the viruses and prokaryotic organisms and can categorize them.

CO3: Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi.

CO4: Classify fungi, lichens, algae and bryophytes based on their structure, reproduction an life cycles.

CO5: Evaluate the ecological and economic value of microbes, thallophytes and bryophytes.

SEMESTER- III

TITLE OF THE COURSE: ANATOMY OF ANGIOSPERMS, PLANT ECOLOGY & BIODIVERSITY

COURSE CODE: BOT-301

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

CO1: Understand on the organization of tissues and tissue systems in plants.

CO2: Illustrate and interpret various aspects of embryology.

CO3: Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and Biotic factors on plant communities.

CO4: Appraise various qualitative and quantitative parameters to study the population and community Ecology.

CO5: Correlate the importance of biodiversity and consequences due to its loss and enlist the Endemic /endangered flora and fauna from two biodiversity hot spots in India and assess strategies For their conservation.

SEMESTER -V

TITLE OF THE COURSE: CELL BIOLOGY, GENETICS AND PLANT BREEDING

COURSE CODE: BOT-501

Course Outcomes: At the end of this course, students should be able to:
CO1: Distinguish prokaryotic and eukaryotic cells and design the model of a cell. Explain the Organization of a eukaryotic chromosome and the structure of genetic material.
CO2: Demonstrate techniques to observe the cell and its components under a microscope.
CO3: Discuss the basics of Mendelian genetics, its variations and interpret inheritance of traits in living Beings.
CO4: Elucidate the role of extra-chromosomal genetic material for inheritance of characters.
CO5: Evaluate the structure, function and regulation of genetic material.
CO6: Understand the application of principles and modern techniques in plant breeding

SEMESTER -V

TITLE OF THE COURSE: PLANT ECOLOGY & PHYTOGEOGRAPHY
COURSE CODE: BOT-502

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

CO1: Distinguish the Ecology, Branches and significance.
CO2: Explain the concept and components, productivity of ecosystem.
CO3: Demonstrate plant communities, interaction between plants growing in a community.
CO4: Discuss the Principles of Phytogeography, Distribution.
CO5: Elucidate Phytogeographic regions of India.
CO6: Evaluate the levels of biodiversity. Understand conservation of genetic resources and their Importance.

SEMESTER- II

TITLE OF THE COURSE: BASICS OF VASCULAR PLANTS AND PHYTO GEOGRAPHY
COURSE CODE: BOT21A

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

CO1: Gain knowledge in the classification and comparison of Pteridophytes and Gymnosperms based on their morphology, anatomy, reproduction and life cycle.

CO2: Justify evolutionary trends in Tracheo phytes to adapt for land habitat. Evaluate the ecological, ethnic and economic value of different tracheophytes and summarize their good and services for human welfare

CO3: Explanation of the process of fossilization and compare the characteristics of extinct and extant plants.
CO4: Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.
CO5: Locate different Phytogeographical regions of the world and India and cananalyze their floristic wealth.

SEMESTER- IV
TITLE OF THE COURSE: PLANT PHYSIOLOGY AND METABOLISM
COURSE CODE: BOT-401

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

CO1: Comprehend the importance of water in plant life and mechanisms for transport of water and solutes in plants.
CO2: Evaluate the role of minerals in plant nutrition and their deficiency symptoms, Interpret the role of enzymes in plant metabolism.
CO3: Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.
CO4: Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.
CO5: Evaluate the phyto hormones that regulate growth and development in plants, examine the role of light on flowering and explain physiology of plants under stress conditions.

TITLE OF THE COURSE: CELL BIOLOGY, GENETICS AND PLANT BREEDING
COURSE CODE: BOT-402

SEMESTER- IV

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

CO1: Distinguish prokaryotic and eukaryotic cells and design the model of a cell.
CO2: Explain the organization of a eukaryotic chromosome and the structure of genetic material.
CO3: Demonstrate techniques to observe the cell and its components under a microscope.
CO4: Discuss the basics of Mendelian genetics, its variations and interpret inheritance of traits in living Beings.
CO5: Elucidate the role of extra-chromosomal genetic material for inheritance of characters.
CO6: Evaluate the structure, function and regulation of genetic material. Understand the application of principles and modern techniques in plant breeding. Explain the procedures of
Selection and hybridization for improvement of crops.

SEMESTER VI

TITLE OF THE COURSE: PLANT TISSUE CULTURE AND ITS BIOTECHNOLOGICAL APPLICATIONS

COURSE CODE: BOT- 601

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

CO1: Analyze the basic principles of plant tissue culture

CO2: Explain the, various culturing techniques.

CO3: Demonstrate recombinant DNA technology.

CO4: Discuss the methods of gene transfer.

CO5: Understand the applications of plant genetic engineering, elucidate the selection of transgenics.

SEMESTER: VI

TITLE OF THE COURSE: PLANT DIVERSITY AND HUMAN WELFARE

COURSE CODE: BOT -602

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

CO1: Distinguish the levels of biodiversity.

CO2: Explain the loss of biodiversity at different levels.

CO3: Demonstrate contemporary practices in resource management.

CO4: Discuss the conservation of biodiversity.

CO5: Elucidate the role of plants in relation to human welfare.

TITLE OF THE COURSE: ETHNO BOTANY AND MEDICINAL BOTANY

COURSE CODE: BOT- 603

SEMESTER: VI

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

CO1: Analyze the concept, scope and objectives.
CO2: Explain the role of ethno botany in modern medicine.
CO3: Demonstrate ethno botany as a tool to protect interests of ethnic groups.
CO4: Discuss the history scope and importance of medicinal plants in indigenous medicinal sciences.

CO5: Elucidate the conservation of endangered and endemic medicinal plants.

SEMESTER: VI

TITLE OF THE COURSE: PHARMACOGNOSY AND PHYTO CHEMISTRY COURSE CODE: BOT- 604
COURSE OUTCOMES: At the end of this course, students should be able to:

CO1: Remember the importance of pharmacognosy.
CO2: Understand organoleptic and microscopic studies with reference to nature of active principles and common adulterants of certain species.
CO3: Apply detailed account of acetate pathway, mevalonate pathway and shikimate pathway.
CO4: Analyze the importance of phy to chemicals.
CO5: Evaluate the biological importance of secondary metabolites.
CO6: Create enzymes proteins and amino acids as drugs.
SEMESTER V
TITLE OF THE COURSE: PLANT NURSERY MANAGEMENT

COURSE CODE: PNT-502

COURSE OUTCOMES: At the end of this course, students should be able to:
CO1: Understand the importance of plant nursery, basic infrastructure to establish it.
CO2: Explain the basic material, tools and techniques required for nursery.
CO3: Demonstrate expertise related to various practices in a nursery
CO4: Comprehend knowledge and skills to get an employment or to become an entrepreneur in plant nursery sector.

DEPARTMENT OF COMMERCE

SEMESTER-I
TITLE OF THE PAPER: FUNDAMENTALS OF ACCOUNTING – I
COURSE CODE:- CACC -101G/C C

COURSE OBJECTIVE:-

1. To make the students acquire the conceptual knowledge of accounting.
2. To equip the students with the knowledge of accounting process and preparation of organisation's Final Accounts for a specific period.

COURSE OUTCOMES:

CO1: Student acquire conceptual knowledge in financial accounting and to impart skills to develop a working vocabulary of accounting terminology.

CO2: Students will develop the ability to prepare subsidiary books and different types of cash book including petty cash book

CO3: Students will acquire the reason for differences and their emergence in bank statements of any Organization.

CO4: Grasp the accounting treatment in issue of negotiable instruments and also learn the techniques of accounting to bills

CO5: Students will develop the ability to organize the complex data of accounts to solve the problem in preparation of final books of accounts.

SEMESTER – I

TITLE OF THE PAPER: BUSINESS ORGANISATIONAND MANAGEMENT
COURSE CODE:- CBOM -102C C
COURSE OBJECTIVES:

1. Describe the difference among trade, commerce and industry
2. To make the students acquire the conceptual knowledge of different types business organisations
3. To make the students acquire the knowledge of management and Management role in the organisation

COURSE OUTCOMES:

CO1: To understand the basic concepts in Commerce, trade and industry and enable to expose to the modern business world.

CO2: To understand the nature, purpose and importance of different types of organizations.

CO3: To familiarize the students with the fundamentals of Joint Stock Company as per Companies Act, 2013

CO4: To understand the basic concepts of management and Management role in the organisation

CO5: Understand the concept of product and identify the need of product mix and product line decisions.

SEMESTER – II

TITLE OF THE PAPER: FUNDAMENTALS OF ACCOUNTING –II
COURSE CODE: CACC -201G/C C

COURSE OBJECTIVE:-

1. To make the students acquire the knowledge in special type of
2. Transactions and also the importance of negotiable instruments

COURSE OUTCOMES:

CO1: Able to discuss and describe various methods of depreciation and valuation of depreciation to depreciable assets.

CO2: Able to discuss and describe different types of reserves and provisions and give accounting treatment for reserves and provisions in final accounts

CO3: Grasp the accounting treatment in issue of negotiable instruments and also learn the techniques of accounting to bills

CO4: Gain an understanding with regard to special transactions related to accounting for consignment.

CO5: Gain the knowledge with regard to special transactions relating to joint Venture business.

SEMESTER – II

TITLE OF THE PAPER: BUSINESS ECONOMICS COURSE CODE: BE-202G/C C

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

CO1: Describe the nature of economics in dealing with the issues of scarcity of resources.

CO 2: Analyze supply and demand analysis and its impact on consumer behaviour

CO 3: Evaluate the factors, such as production and costs affecting firms behaviour

CO4: Recognize market failure and the role of government in dealing with those failures

CO5: Apply economic models for managerial problems, identify their relationships, and formulate the decision making tools to be applied for business.

SEMESTER – III

TITLE OF THE PAPER: CORPORATE ACCOUNTING COURSE CODE: CCA-301G/C C

COURSE OBJECTIVES:

1. To make the students acquire the knowledge in special type of transactions and also the importance of company accounting.

2. To make the students acquire the knowledge about companies' act 2013.
3. To equip the students with the knowledge of accounting process and preparation of final accounts.

COURSE OUTCOMES:
CO1: The students will have a good command on issue of shares and also forfeiture and reissue of shares.
CO2: The students will be able to know how to allocate the expenses and incomes prior to incorporation and after incorporation.
CO3: The students will be able to learn various methods for valuation of goodwill and shares.
CO4: The students will able to known how to prepare profit and loss and balance sheet as per companies' act 2013.
CO5: The students will acquire knowledge regarding rules and regulations of companies' act 2013.

SEMESTER – III

TITLE OF THE PAPER: BUSINESS STATISTICS COURSE CODE: CBS -302G/C C

COURSE OBJECTIVE:

1. The objective of this course is to impact knowledge on the application of Statistical tools and techniques in business decision making.

2. To make the students acquire the knowledge of Design, evaluate and apply correlation analysis

COURSE OUTCOMES

CO1: Describe the structure and characteristics of statistical data. able to present the data with diagrams

CO2: Calculate and interpret measures of central tendency and variability in statistical data.

CO3: Calculate and interpret measures of dispersion and skewness

CO4: Design, evaluate and apply correlation analysis.

CO5: To study the past behaviour of data and measure the effect of changes over the period of time.

SEMESTER – IV

Title of the paper: ACCOUNTING FORSERVICE ORGANISATION
COURSE CODE: CASO -401G C

COURSE OBJECTIVES:
1. To enable the students to understand company (Non profit originations) as per Sec (8) of Companies Act 2013 and prepare its final accounts

2. To provide and enable the students with the basic knowledge relating to the electricity, bank, and Insurance Companies its typical terms and prepare financial statements of accounts
COURSE OUTCOMES:

CO1: The students will acquire knowledge about non-profit organizations and how to prepare financial statements of non- profit organizations.

CO2: The students will be able to prepare financial statements electricity companies.

CO3: The students will be able to prepare financial statements banking companies.

CO4: The students will able to know how to ascertain the profit of Life insurance companies and to prepare valuation balance sheet.

CO5: The students will able to know how to ascertain the profit of General insurance companies and to calculate reserve for unexpired risks.
SEMESTER – IV

TITLE OF THE PAPER: BUSINESS LAWS COURSE CODE: CBL -403G/C C

COURSE OBJECTIVE:
To make the students learn the basics of business laws and apply them in real life Situation
COURSE OUTCOMES:
CO1: Impacts the students in acquiring the basic knowledge regarding contracts in business.

And impact of it to "QUID-PRO-QUO" for the enforceability of the contract

CO2: Students will have clarity on competency of persons, modes of discharge of contract, analyzing and approaching to remedies in times of breach of contract.

CO3: Students will get knowledge in law and procedure relating to sale of goods in Indian context.

CO4: Students are able to acquire knowledge in law and procedure relating to consumer rights

CO5: Students will get knowledge in new dimensions in business Organisation relating to cyber laws

SEMESTER – V

TITLE OF THE PAPER: BUSINESS LEADERSHIP COURSE CODE: CBLP -501G/C C

COURSE OBJECTIVES:

1. To make the students acquire the knowledge in leadership
2. To impart leadership skills among the students

COURSE OUTCOMES:
CO1: Students able to learn leadership skills

CO2: students impart knowledge about leadership in organisations.

CO3: students can build an idea about familiar business persons
SEMESTER – V

TITLE OF THE PAPER: COST ACCOUNTING COURSE CODE: CCOA -502G/C C

COURSE OBJECTIVE:
1. To understand the basic concepts and process used determine product costs,

2. To be able to interpret cost accounting statements, and evaluate information for cost ascertainment planning, control and decision making

COURSE OUTCOMES
CO1: Impart knowledge on the fundamental concept of cost accounting.

CO2: Comprehend the knowledge in effective control of raw materials and work in progress.

CO3: Build an idea about incentive plans based on production and cost savings.

CO4- C04: Familiarize the students about the production progress with the help of departmental manager.

CO5- Students will understand the profit making decisions in complex situations of any business Organisation.

SEMESTER –V
TITLE OF THE PAPER: GOODS &SERVICE TAX FUNDAMENTALS
COURSE CODE: CGST -503G C

COURSE OBJECTIVES:
1. Demonstrate knowledge of the concepts, principles, and models of goods &service tax
2. To equip the students with the knowledge of laying rules regulations and notifications in GST council

3. To provide and enable the students with the basic knowledge of Input tax credit

COURSE OUTCOMES:

CO1: Impact knowledge on the Overview of GST and Justification for Introduction of GST **a**nd acquire knowledge about Constitutional Amendments in GST

CO2: Students get knowledge about GST Principles and Models of GST Austrian, Canadian; the student can build an idea about Comprehensive Structure of GST model in India

CO3: The student will be able to understand Taxes and Duties under GST and also Taxation of services and Tax on Petroleum products

CO4: The student can build an idea about IGST Model and also Transactions within a State under GST

CO5: Students get knowledge about Value of Supply - Input Tax Credit and Distribution of Credit, Matching of Input Tax Credit

SEMESTER –V
TITLE OF THE PAPER: TAXATION COURSE CODE: CTAX-5013 C C

COURSE OBJECTIVES:

1. Demonstrate knowledge of the concepts, principles, and rules of taxation of individuals and small businesses
2. Recognize tax planning opportunities and recommend appropriate tax-saving strategies for decision making
3. Address tax situations for a variety of taxpayers, such as wage earners, salespersons, owners of small business, professionals, investors, home and rental property owners, farmers, etc

COURSE OUTCOMES:

CO1: Impact knowledge on the provisions of income tax law and practice **a**ndacquire knowledge about Exempted incomes and residential status of an individual

CO2: Acquire Knowledge about Service tax -VAT -Central Sales Tax and GST

CO3: Enlist the ability of provisions of income from salary and its taxability**.** The student can build an idea about income from house property and its taxability. The student can acquire knowledge in calculation of Capital gains and Income from other sources

CO4: Impact knowledge on Taxation system in India and Modes of Tax Recovery and acquire knowledge on Filing of Returns

CO5: Recognize tax planning opportunities and recommend appropriate tax-saving strategies for decision making

SEMESTER – V

TITLE OF THE PAPER: COMMERCIAL GEOGRAPHY COURSE CODE: C C G -505G/C C

COURSE OBJECTIVES:

1. To identify the early commercial activities in the world reflecting different occupations in variousϖ environments.

2. To note, shift and change from primitive activities, and to understand the different stages of agriculturalϖ development.

COURSE OUTCOMES:

CO1: Understand the importance of early commercial activities in the world reflecting Different occupations in various environments.

CO2: Explain different stages of agricultural development using additional OE resources Available in the internet using modern ICT tools.

CO3: Respond to the changes involved in the Indian forests and need for protection of Forests and Forests Conservation Act.

CO4: Know different types of minerals India and mining and their uses.

CO5: Examine Indian water resources, Interlinking of Rivers India and Experience of India and Andhra Pradesh.

SEMESTER-VI

TITLE OF THE PAPER: EVENT MANAGEMENT **COURSE CODE:** CEM-601 G/C C

COURSE OBJECTIVES:

1. Identifying events and determining corresponding control measuresϖ that events can be programmed in such a way that operational information is transferred

2. Develop and implement financial initiatives based on event objectives through methods such as sponsorship programs, grant applications, and fundraising initiatives. Plan, design, and coordinate effective site and facility operations.ϖ

COURSE OUTCOMES

CO1: Identify the needs of customers for organizing a corporate event and understand the types of Events.

CO2: Examine various types of Outdoor events and Managing the risk in the events.
Relate Marketing management, Human Resource Management to Event Management

CO3: Students able to organize Shows, fashion shows, high profile charity events.

SEMESTER-VI

TITLE OF THE PAPER: MARKETING **COURSE CODE: CM-602G/C C**

Course Objective:
1. To acquire knowledge on marketing concepts, 7P's, to build applicable skills through variety internship opportunities
2. Student w ill gain understanding of consumer buyer behaviour, pricing strategies and ethical concept of marketing

COURSE OUTCOMES

CO1: To introduce the concepts of marketing and understand the factors influence the market environment.

CO2: Analyze the consumer market models and enlightens consumer buyer behaviour models.

CO3: Understand the concept of product and identify the need of product mix and product line decisions.

CO4: Develop an idea about pricing strategies and pricing decisions.

CO5: Enhance the students about decisions regarding promotion and distribution channels.

SEMESTER –VI
TITLE OF THE PAPER: AUDITING COURSE CODE: CAU-603 G/C C

COURSE OBJECTIVES:

1. To impart knowledge pertaining to basic concepts of auditing.
2. To make the students learn the basics of rights and duties regarding auditing and audit report.
3. To acquaint oneself with auditing procedure.

COURSE OUTCOMES

CO1: Students will develop the knowledge & importance of auditing and accounting Of any Organisation and Role of Auditor in checking corporate frauds.

CO2: Students will have the ability of understanding the applicability of auditing types for different organizations

CO3: Students will have knowledge in planning the effectiveness of auditing and also internal check, internal audit and internal control.

CO4; Students will have proper understanding of the requirements of documentary evidence for the completion of Vouching and Investigation.

CO5: Students will have the knowledge in Company Audit and Auditors Report

SEMESTER-VI

TITLE OF THE PAPER: MANAGEMENT ACCOUNTING COURSE CODE: CMA-604 G/C C

COURSE OBJECTIVE:

1. To acquire knowledge about management accounting its applications, ratios and CVP analysis.
2. To acquire knowledge about preparation of various financial statements

COURSE OUTCOMES

CO1: Students will critically understanding the financial and management accounting importance in understanding the business operations using different tools

CO2: Students will understand the importance of changes of working capital for any Organisation and analysing the flow of fund

CO3: Students will critically understanding the cash and fund flow concept and impact of cash flow on business operations

CO4: Students will have the ability of assessing the solvency and profitability of any Organisation

CO5: Students will understand the profit making decisions in complex situations of any business Organisation

SEMESTER – I

TITLE OF THE PAPER: FUNDAMENTALS OF ACCOUNTING – I
COURSE CODE: CACC -101G/C C

COURSE OBJECTIVE:-
1. To make the students acquire the conceptual knowledge of accounting.
2. To equip the students with the knowledge of accounting process and preparation of organisation's Final Accounts for a specific period.

Course outcomes:

CO1: Student acquires conceptual knowledge in financial accounting and to impart skills to develop a working vocabulary of accounting terminology.

CO2 : Students will develop the ability to prepare subsidiary books and different types of cash book including petty cash book

CO3: Students will acquire the reason for differences and their emergence in bank statements of any Organization.

CO4: Grasp the accounting treatment in issue of negotiable instruments and also learn the techniques of accounting to bills

CO5: Students will develop the ability to organize the complex data of accounts to solve the problem in preparation of final books of accounts.

SEMESTER – I

TITLE OF THE PAPER: BUSINESS ORGANIZATION COURSE CODE: CBO-102G/C

COURSE OBJECTIVES:

1. Describe the difference among trade, commerce and industry
2. To make the students acquire the conceptual knowledge of different types business organisations

COURSE OUTCOMES:

CO1: To understand the basic concepts in Commerce, trade and industry and enable to expose to the modern business world.

CO2: Enable to identify the role of an entrepreneur in developing a new venture.

CO3: To understand the nature, purpose and importance of different types of organizations.

CO4: To familiarize the students with the fundamentals of Joint Stock Company as per Companies Act, 2013.

CO5: To acquaint with incorporation stages and to create awareness on documentation.

SEMESTER – I

TITLE OF THE PAPER: BUSINESSENVIRONMENT COURSE CODE: CBEN -201G C

COURSE OBJECTIVE:

1. This course develops the ability to understand and scan the business Environment and analyse opportunities and take decisions under uncertainty.

2. Students able to understand various economic policies, structure and importance of Union budgets and legal aspect regarding companies act 2013

COURSE OUTCOMES:

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

CO2: To enlighten/familiarize the impact of economic growth and economic Development on businesses.

CO3: To acquire specialized knowledge relating to economic development and Economic planning in India.

CO4: To familiarize with various economic policies, structure and importance of Union budgets.

CO5: To enlighten about legal, social, political and ethical environment of business.

SEMESTER – II

TITLE OF THE PAPER: FUNDAMENTALS OF ACCOUNTING –II
COURSE CODE: CACC -201G/C C

COURSE OBJECTIVE:-
1.To make the students acquire the knowledge in special type of
2. Transactions and also the importance of negotiable instruments

Course outcomes:

CO1: Able to discuss and describe various methods of depreciation and valuation of depreciation to depreciable assets.

CO2: Able to discuss and describe different types of reserves and provisions and give accounting treatment for reserves and provisions in final accounts

CO3: Grasp the accounting treatment in issue of negotiable instruments and also learn the techniques of accounting to bills

CO4: Gain an understanding with regard to special transactions related to accounting for consignment.

CO5: Gain the knowledge with regard to special transactions relating to joint Venture business.

SEMESTER – II

TITLE OF THE PAPER: BUSINESS ECONOMICS COURSE CODE: BE-202G/C C

LEARNING OUTCOMES:

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

CO 1: Describe the nature of economics in dealing with the issues of scarcity of resources.

CO 2: Analyze supply and demand analysis and its impact on consumer behaviour

CO 3: Evaluate the factors, such as production and costs affecting firms behaviour

CO 4: Recognize market failure and the role of government in dealing with those failures

CO 5: Apply economic models for managerial problems, identify their relationships, and formulate the decision making tools to be applied for business.

SEMESTER –II
TITLE OF THE PAPER: BANKING THEORY & PRACTICE
COURSE CODE: CBTP-203G/C

COURSE OBJECTIVE:

1. To impart knowledge in banking and financial services and update the innovations of the current banking system like E-Banking advancements.

2. To equip the students with the knowledge of Reserve Bank, Narbad and KYC norms

3. To provide and enable the students with the basic knowledge relating to general and special relationship between Banker and Customer

COURSE OUTCOMES*:*

CO1: To understand the importance of commercial banking and the operations and structure of different financial institutions. To familiarize the students with regard of Organization working and importance of RBI

CO2: To train and equip with the skills in banking and financial services and Innovations of the current banking systems like e-banking advancements

CO3: To familiarize the students with regard to working and importance of Regional Rural Bank and NABARD

CO4: To know about the general and special relationship between Banker and Customer and KYC norms.

CO5: To get knowledge about Duties & Responsibilities of Collecting Banker and Responsibilities of Paying Banker - Payment Gateways.

SEMESTER – III

TITLE OF THE PAPER: CORPORATE ACCOUNTING
COURSE CODE: CCA-301G/C C

COURSE OBJECTIVES:

1. To make the students acquire the knowledge in special type of transactions and also the importance of company accounting.

2. To make the students acquire the knowledge about companies' act 2013.
3. To equip the students with the knowledge of accounting process and preparation of final accounts.

COURSE OUTCOMES:

CO1: The students will have a good command on issue of shares and also forfeiture and reissue of shares.

CO2: The students will be able to know how to allocate the expenses and incomes prior to incorporation and after incorporation.

CO3: The students will be able to learn various methods for valuation of goodwill and shares.

CO4: The students will able to known how to prepare profit and loss and balance sheet as per companies' act 2013.

CO5: The students will acquire knowledge regarding rules and regulations of companies' act 2013.

SEMESTER – III

TITLE OF THE PAPER: BUSINESS STATISTICS COURSE CODE: CBS -302G/C C
COURSE OBJECTIVE:
1. The objective of this course is to impact knowledge on the application of Statistical tools and techniques in business decision making.

2. To make the students acquire the knowledge of Design, evaluate and apply correlation analysis

COURSE OUTCOMES

CO1: Describe the structure and characteristics of statistical data. able to present the data with diagrams

CO2: Calculate and interpret measures of central tendency and variability in statistical data.

CO3: Calculate and interpret measures of dispersion and skewness

CO4: Design, evaluate and apply correlation analysis.

CO5: To study the past behaviour of data and measure the effect of changes over the period of time.

SEMESTER –III

TITLE OF THE PAPER: BANKING THEORY & PRACTICE COURSE CODE: CBTP -303G C

COURSE OBJECTIVE:

1. To impart knowledge in banking and financial services and update the innovations of the current banking system like E-Banking advancements.

2. To equip the students with the knowledge of Reserve Bank,Narbad and KYC norms

3. To provide and enable the students with the basic knowledge relating to general and special relationship between Banker and Customer

COURSE OUTCOMES:

CO1: To understand the importance of commercial banking and the operations and structure of different financial institutions. To familiarize the students with regard of Organization working and importance of RBI

CO2: To train and equip with the skills in banking and financial services and Innovations of the current banking systems like e-banking advancements

CO3: To familiarize the students with regard to working and importance of Regional Rural Bank and NABARD

CO4: To know about the general and special relationship between Banker and Customer and KYC norms.

CO5: To get knowledge about Duties & Responsibilities of Collecting Banker and Responsibilities of Paying Banker - Payment Gateways.

SEMESTER – IV

TITLE OF THE PAPER: ACCOUNTING FORSERVICE ORGANISATION
COURSE CODE: CASO -401G C

COURSE OBJECTIVES:

1. To enable the students to understand company (Non profit originations) as per Sec (8) of

Companies Act 2013 and prepare its final accounts

2. To provide and enable the students with the basic knowledge relating to the electricity, bank, and Insurance Companies its typical terms and prepare financial statements of accounts

COURSE OUTCOMES:

CO1: The students will acquire knowledge about non-profit organizations and how to prepare financial statements of non- profit organizations.

CO2: The students will be able to prepare financial statements electricity companies.

CO3: The students will be able to prepare financial statements banking companies.

CO4: The students will able to know how to ascertain the profit of Life insurance companies and to prepare valuation balance sheet.

CO5: The students will able to know how to ascertain the profit of General insurance companies and to calculate reserve for unexpired risks.

SEMESTER –IV
TITLE OF THE PAPER: INCOME TAX COURSE CODE: CTAX -402G C

COURSE OBJECTIVES:

1. To Impart knowledge of the concepts, principles, and rules of taxation of individuals and Agricultural Income

2. To provide and enable the students with the basic knowledge of Computation of total income of an individual

3. Recognize tax planning opportunities and recommend appropriate tax-saving strategies for decision making

COURSE OUTCOMES:

CO1: Impact knowledge on the provisions of income tax law and practice Acquire Knowledge about Income exempt from tax and residential status of an individual

CO2: Enlist the ability of provisions of Income from salary and its deductions u/s 80c

CO3: The student can build an idea about Income from house property and its taxability

CO4: The student can acquire knowledge in calculation of capital gain and income from Other sources

CO5: The student can acquire knowledge in calculation of Computation of total income of an Individual

SEMESTER – IV

TITLE OF THE PAPER: BUSINESS LAWS COURSE CODE: CBL -403G/C C

COURSE OBJECTIVE:
To make the students learn the basics of business laws and apply them in real life Situation

COURSE OUTCOMES:
CO1: Impacts the students in acquiring the basic knowledge regarding contracts in business. and impact of it to "QUID-PRO-QUO" for the enforceability of the contract

CO2: Students will have clarity on competency of persons, modes of discharge of contract, analyzing and approaching to remedies in times of breach of contract.

CO3: Studentswillgets knowledge in law and procedure relating to sale of goods in Indian context.

CO4: Students are able to acquire knowledge in law and procedure relating to consumer rights

CO5-: Students will get knowledge in new dimensions in business Organisation relating to cyber laws

SEMESTER – V

TITLE OF THE PAPER: BUSINESS LEADERSHIP COURSE CODE: CBLP -501G/C C

COURSE OBJECTIVES:

1. To make the students acquire the knowledge in leadership
2. To impart leadership skills among the students

COURSE OUTCOMES:

CO1: Students able to learn leadership skills

CO2: students impart knowledge about leadership in organisations.

CO3: students can build an idea about familiar business persons

SEMESTER – V

TITLE OF THE PAPER: COST ACCOUNTING COURSE CODE: CCOA -502G/C C

COURSE OBJECTIVE:
1. To understand the basic concepts and process used determine product costs,

2. To be able to interpret cost accounting statements, and evaluate information for cost ascertainment planning, control and decision making

COURSE OUTCOMES

CO1: Impart knowledge on the fundamental concept of cost accounting.

CO2: Comprehend the knowledge in effective control of raw materials and work in progress.

CO3: Build an idea about incentive plans based on production and cost savings.

CO4- C04: Familiarize the students about the production progress with the help of departmental manager.

CO5- Students will understand the profit making decisions in complex situations of any business Organisation.

SEMESTER –V
TITLE OF THE PAPER: GOODS &SERVICE TAX FUNDAMENTALS

COURSE CODE: CCOA -502G/C C

COURSE OBJECTIVES:

1. Demonstrate knowledge of the concepts, principles, and models of goods &service tax
2. To equip the students with the knowledge of laying rules regulations and notifications in GST council
3. To provide and enable the students with the basic knowledge of Input tax credit

COURSE OUTCOMES:
CO1: Impact knowledge on the Overview of GST and Justification for Introduction of GST **a**nd acquire knowledge about Constitutional Amendments in GST

CO2: Students get knowledge about GST Principles and Models of GST Austrlian, Candian; the student can build an idea about Comprehensive Structure of GST model in India

CO3: The student will be able to understand Taxes and Duties under GST and also Taxation of services and Tax on Petroleum products

CO4: The student can build an idea about IGST Model and also Transactions within a State under GST

CO5: Students get knowledge about Value of Supply - Input Tax Credit and Distribution of Credit, Matching of Input Tax Credit

SEMESTER – V

TITLE OF THE PAPER: COMMERCIAL GEOGRAPHY
COURSE CODE: C C G -505G/C C

COURSE OBJECTIVES:

1. To identify the early commercial activities in the world reflecting different occupations in variousϖ environments.
2. To note, shift and change from primitive activities, and to understand the different stages of agriculturalϖ development.

COURSE OUTCOMES:

CO1: Understand the importance of early commercial activities in the world reflecting Different occupations in various environments.

CO2: Explain different stages of agricultural development using additional OE resources Available in the internet using modern ICT tools.

CO3: Respond to the changes involved in the Indian forests and need for protection of Forests and Forests Conservation Act.

CO4: Know different types of minerals India and mining and their uses.

CO5: Examine Indian water resources, Interlinking of Rivers India and Experience of India and Andhra Pradesh.

SEMESTER – V

TITLE OF THE PAPER: CENTRAL BANKING COURSE CODE: **CCB-505CE G/C**

COURSE OBJECTIVE:

To acquire basic knowledge about central bank functions and role of RBI in India

COURSE OUTCOMES

CO1: Students are able to impart concepts of central banking

CO2: Understand the role of RBI in India

CO3: Students can learn about policies issued by RBI.

CO4: Students will acquire the knowledge about RBI mechanism to control inflation

CO5: Students are able to learn norms issued by RBI

SEMESTER – V

TITLE OF THE PAPER: RURAL AND FARM CREDIT COURSE CODE: CRC-506 CE G/C

COURSE OBJECTIVE:

1. To acquire basic knowledge about rural development and empowerment of farming community by banks,

2. Students are able solve simple problems through case study of Farm Credit

COURSE OUTCOMES:

CO1: Students are able to impart knowledge about concepts of rural credit

CO2: Students are able to impart knowledge about rural credit agencies

CO3: Students can acquire knowledge problems and remedies of Farm Credit

CO4: Students are able to impart knowledge about sources of farm credit

CO5: Students able to learn norms issued by RBI

SEMESTER-VI

TITLE OF THE PAPER: EVENT MANAGEMENT COURSE CODE: CEM-601 G/C C

COURSE OBJECTIVES:

1. Identifying events and determining corresponding control measuresϖ that events can be programmed in such a way that operational information is transferred

2. Develop and implement financial initiatives based on event objectives through methods such asϖ sponsorship programs, grant applications, and fundraising initiatives. Plan, design, and coordinate effective site and facility operations.ϖ

COURSE OUTCOMES

CO1: Identify the needs of customers for organizing a corporate event and understand the types of Events.

CO2: Examine various types of Outdoor events and Managing the risk in the events.
Relate Marketing management, Human Resource Management to Event Management
CO3: Students able to organize Shows, fashion shows, high profile charity events.

SEMESTER-VI

TITLE OF THE PAPER: MARKETING COURSE CODE: - CM-602G/C C

COURSE OBJECTIVE:
1. To acquire knowledge on marketing concepts, 7P's, to build applicable skills through variety internship opportunities

2. Student w ill gain understanding of consumer buyer behaviour, pricing strategies and ethical concept of marketing

COURSE OUTCOMES

CO1: To introduce the concepts of marketing and understand the factors influence the market environment.

CO2: Analyze the consumer market models and enlightens consumer buyer behaviour models.

CO3: Understand the concept of product and identify the need of product mix and product line decisions.

CO4: Develop an idea about pricing strategies and pricing decisions.

CO5: Enhance the students about decisions regarding promotion and distribution channels.

SEMESTER –VI
TITLE OF THE PAPER: AUDITING COURSE CODE: - CAU-603 G/C C

COURSE OBJECTIVES:
4. To impart knowledge pertaining to basic concepts of auditing.
5. To make the students learn the basics of rights and duties regarding auditing and audit report.

6. To acquaint oneself with auditing procedure.

COURSE OUTCOMES

CO1: Students will develop the knowledge & importance of auditing and accounting Of any Organisation and Role of Auditor in checking corporate frauds.

CO2: Students will have the ability of understanding the applicability of auditing types for different organizations

CO3: Students will have knowledge in planning the effectiveness of auditing and also internal check, internal audit and internal control.

CO4; Students will have proper understanding of the requirements of documentary evidence for the completion of Vouching and Investigation.

CO5: Students will have the knowledge in Company Audit and Auditors Report

SEMESTER-VI

TITLE OF THE PAPER: MANAGEMENT ACCOUNTING
COURSE CODE: - CMA-604 G/C C
COURSE OBJECTIVE:

1. To acquire knowledge about management accounting its applications, ratios and CVP analysis.

2. To acquire knowledge about preparation of various financial statements

COURSE OUTCOMES
CO1: Students will critically understanding the financial and management accounting importance in understanding the business operations using different tools

CO2: Students will understand the importance of changes of working capital for any Organisation and analysing the flow of fund

CO3: Students will critically understanding the cash and fund flow concept and impact of cash flow on business operations

CO4: Students will have the ability of assessing the solvency and profitability of any Organisation

CO5: Students will understand the profit making decisions in complex situations of any business Organisation

SEMESTER-VI

TITLE OF THE PAPER: FINANCIAL SERVICES COURSE CODE: - CFS-605 CE G/C
COURSE OBJECTIVE:

1. To acquire knowledge about various financial services offered by banking and nom-.banking companies

2. Students will develop an idea of recent trends in financial services

COURSE OUTCOMES

CO1: Students can impart knowledge about various financial services offered by banking and nom-.banking companies

CO2: Students can understand various merchant banking services

CO3: To know emergence and development of financial services in leasing and hire-purchase

CO4 : Students will acquire the knowledge of various credit rating agencies and concept of mutual funds

CO5: To understand the various financial services and their future

SEMESTER-VI

TITLE OF THE PAPER: MARKETING OF FINANCIAL SERVICES

COURSE CODE: - CMFS-606 CE G/C

COURSE OBJECTIVES:

1. To acquire knowledge about various financial services offered by banking and nom-.banking companies

2. Students are able to learn basic concepts in marketing of financial services And environment

COURSE OUTCOMES:

CO1: Students are able to learn basic concepts in marketing of financial services

CO2: Students are able to learn the concepts of service environment

CO3: Students are able to impart knowledge about pricing strategies and promotion strategies

CO4: Students can impart knowledge regarding promotion and distribution

CO5 : Students can impart knowledge about various retail financial services

DEPARTMENT OF COMPUTER SCIENCE

SEMESTER:II

TITLE OF THE COURSE : DATA STRUCTURES COURSE CODE: CSCT21B

Upon successful completion of this course, students should have the knowledge and skills to:

COURSE OUTCOMES:

CO1: Learn the concepts of ADT and understand analysis of algorithms

CO2: Understand available Data Structures for data storage and processing.

CO3: Understand available Data Structures for data storage and processing.

CO4: Learn stacks, queues and their applications

CO5: Understand trees, graphs and implement their operations Develop ability to implement different Sorting and Search methods

SEMESTER:II

TITLE OF THE COURSE : DATA STRUCTURES LAB COURSE CODE : CSCT21B

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: implement stacks, queues using arrays and linked lists.

CO2: Write program for conversion from infix to postfix.

CO3: implement different sorting and searching techniques.

CO4: Construct binary trees and binary search trees.

CO5 : Implement binary tree and Graph traversals.

SEMESTER:II

TITLE OF THE COURSE : E–COMMERCE & WEB DESIGNING
COURSE CODE :CABT21A

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Gain knowledge in E- commerce and its business models

CO2: Differentiate traditional and e – marketing and also gain knowledge in E-CRM and EPS

CO3: Understand the structure of HTML its basic tags

CO4: Implement various HTML tags for web page development

CO5 : Understand about web page designing

SEMESTER:II

TITLE OF THE COURSE : WEB DESIGN LAB COURSE CODE :CABT21A

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Implement HTML tags.

CO2: Implement HTML tags.

CO3: Implementing lists and tables in web pages.

CO4: Implementing frames in web pages.

CO5 : Understand about web page designing Creation of CSS in a web page.

SEMESTER:II

TITLE OF THE COURSE : INFORMATION TECHNOLOGY
COURSE CODE : CABT21A

On completion of this course, the students will be able to

CO1: Understand fundamental concepts of a computer and its basic components

CO2: Understand basic functioning of an operating system and customizing Windows Desktop

CO3: Analyze type of soft ware's and programming languages

CO4: Have knowledge in basic Network and Data Communication Concepts

CO5: Understand the need of data mining and get familiarize with basics of new concepts like KDD, OLAP

SEMESTER:II

TITLE OF THE COURSE : COMPUTER APPLICATIONS
COURSE CODE : CABT22A

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand fundamental concepts of a computer and its basic components

CO2 Understand basic functioning of an Ms-Office and MS-Word Window Components Windows Desktop

CO3: Analyze type of soft ware's and programming languages

CO4: Have knowledge in MS-Excel and MS Access

CO5: Understand the need of Finding, Sorting and Displaying Data and get familiarize

SEMESTER:II

TITLE OF THE COURSE : COMPUTER APPLICATION LAB
COURSE CODE: CABP22A

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Identifying different components of computer system

CO2 : implement ms-word featues and functionalities

CO3: analyze different softwares and programing languages

CO4: implement ms-exceland its functionalities

CO5: implementing ms-access

SEMESTER:II

TITLE OF THE COURSE : COMPUTER APPLICATION LAB
COURSE CODE: CABP22A

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the benefits of a well-structured program

CO2 : Understand different computer programming paradigms

CO3: Understand underlying principles of Object-Oriented Programming in Java

CO4: Develop problem-solving and programming skills using OOP concepts

CO5: Develop the ability to solve real-world problems through software development in high-level programming language like Java

TITLE OF THE COURSE : OOP'S WITH JAVA LAB COURSE CODE : CSCT01

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Know Computer system resources and the role of operating system in resource management with algorithms

CO2 : Understand Operating System Architectural design and its services

CO3: Gain knowledge of various types of operating systems including Unix and Android

CO4: Understand various process management concepts including scheduling, synchronization, and deadlocks.

CO5: Have a basic knowledge about multithreading and approches for memory management

TITLE OF THE COURSE : OPERATING SYSTEM LAB COURSE CODE : CSCT41C

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Installation of Linux OS

CO2: Installation of Windows Client OS

CO3: Managing Windows Client OS

CO4: Installation of Windows Server OS

CO5: Managing Windows Server OS

TITLE OF THE COURSE : DBMS COURSE CODE : CABT41A

After completion of the course, student will be able to;

CO1: Able to have knowledge about database, Traditional File System.

CO2: Be able to Design a database using Relation models and Data Modeling

CO3: Store, retrieve data in database using Integrity constraints and Normal Forms.

CO4: Be able to implement various SQL queries

CO5: Be able to implement various Procedural SQL queries and

TITLE OF THE COURSE : DBMS COURSE CODE : CABT41A

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Implement stacks, queues using arrays and linked lists.

CO2: Write program for conversion from infix to postfix.

CO3: Implement different sorting and searching techniques.

CO4: Construct binary trees and binary search trees.

CO5: Implement binary tree and Graph traversals.

SEMESTER VI

TITLE OF THE COURSE : WEB TECHNOLOGY COURSE CODE :CSC601GE Upon successful Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the basic structure of a HTML design and develop a website using different text Formatting tags, images, links, lists and tables.

CO2: Understand to style a webpage using CSS and Basic Concepts of Java Scripts

CO3: Understand to style a webpage Using Objects in Java Script and DHTML.

CO4: Understand the Basic Concepts of XML and Defining Data for Web Applications

CO5: Understand the Concepts of JS.

SEMESTER VI

TITLE OF THE COURSE : WEB TECHNOLOGY LAB COURSE CODE : CSC601GE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: implement a website using different text Formatting tags, images, links, lists and tables.

CO2: implement CSS styles on a webpage

CO3: constructing a webpage using objects in java script and DHTML

CO4: imlement XML in a webpage construction

CO5: implement concept of JS

SEMESTER VI

TITLE OF THE COURSE : OOP'S WITH JAVA LAB COURSE CODE : CSCT01

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the concepts Of PHP and MY SQL Installations.

CO2: Able to know the basic concepts Function and Working with Functions.

CO3: Understand the concepts of FORMS and working with FORMS.

CO4: Understand the concepts of MY SQL and MY SQL Components.

CO5: Able to know the concepts of WORD PRESS.

SEMESTER VI

TITLE OF THE COURSE: PHP& MY SQL LAB COURSE CODE: CSC602CE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: able to install PHP and MY SQL and perform basic operations.

CO2: implement the concept of functions .

CO3: implement FORMS.

CO4: able to work with MY SQL.

CO5: able to work with wordpresss.

SEMESTER VI

TITLE OF THE COURSE : JAVA SCRIPT/AJAX COURSE CODE : CSC603CE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the concepts Of HTML and JQUERY

CO2: Understand the concepts JQUERY and CSS Methods using DOM Attributes

CO3: Understand the concepts of JQUERY USER INTERFACE Programs

CO4: Understand the concepts of AJAX and JSON Objects

CO5: Develop the ability to solve real-world problems through software development in high-level programming language like ANGULAR JS and ANIMATIONS

TITLE OF THE COURSE : JAVA SCRIPT LAB COURSE CODE : CSC603CE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: implement the concepts of HTML and JQUERY.

CO2: applying CSS mehods using DOM attributes

CO3: implement the concept of JQUERY USER INTERFACE Programs

CO4: implement concept of AJAX and JSON objects.

CO5: able to solve real world problem through high-level programming languages like ANGULAR JS

SEMESTER VI

TITLE OF THE COURSE : TALLY COURSE CODE : CSC605GE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Able to understand the basic concepts of TALLY

CO2: Able to understand the installation of TALLY Software.

CO3: Able to implement the concepts of ledgers

CO4: Able to implement the concepts of vouchers

CO5: Able to implement the basic concepts of final accounts

SEMESTER VI

TITLE OF THE COURSE : TALLY COURSE CODE : CSC605GE

Upon successful completion of this course, students should have the knowledge and skills to:**CO1**: Able to understand the basic concepts of TALLY

CO1: implement basic concepts of Tally

CO2: able to install TALLY software.

CO3: implement the concepts of ledgers.

CO4: implement the concept of vouchers.

CO5: implement the basic concepts of final accounts.

SEMESTER VI

TITLE OF THE COURSE : E-COMMERCE COURSE CODE : CSC606GE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the benefits of a well-structured program

CO2: Understand different computer programming paradigms

CO3: Understand underlying principles of Object-Oriented Programming in Java

CO4: Develop problem-solving and programming skills using OOP concepts

CO5: Develop the ability to solve real-world problems through software development in high-level programming language like Java

SEMESTER VI

TITLE OF THE COURSE : PHP & MY SQL COURSE CODE : CSC606GE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the benefits of a well-structured program

CO2: Understand different computer programming paradigms

CO3: Understand underlying principles of Object-Oriented Programming in Java

CO4: Develop problem-solving and programming skills using OOP concepts

CO5: Develop the ability to solve real-world problems through software development in high-level programming language like Java

SEMESTER VI

TITLE OF THE COURSE: PHP & MY SQL LAB COURSE CODE : CSC606GE

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: able to install PHP and MY SQL and perform basic operations.

CO2: implement the concept of functions .

CO3: implement FORMS.

CO4: able to work with MY SQL.

CO5: able to work with wordpresss.

SEMESTER V

TITLE OF THE COURSE : DATABASE MANAGEMENT SYSTEM
COURSE CODE : CSC501C

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Able to have knowledge about database, Traditional File System.

CO2: Be able to Design a database using Relation models and Data Modeling

CO3: Store, retrieve data in database using Integrity constraints and Normal Forms.

CO4: Be able to implement various SQL queries

CO5: Be able to implement various Procedural SQL queries

SEMESTER V

TITLE OF THE COURSE : DATABASE MANAGEMENT SYSTEMS LAB
COURSE CODE : CSC501P

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Able to implement basic relationships.

CO2: Able to implement various SQL queries.

CO3: Able to use no of constraints on data.

CO4: Able to use different types of Joins.

CO5: Able to use different types of Functions.

SEMESTER V

TITLE OF THE COURSE : SOFTWARE ENGINEERING
COURSE CODE : CSC 502C

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the conceps of Software Engineering and Process

CO2: Ability to use perfect models according to the requirements of the software projects.

CO3: Ability to analyze software requirements with existing tools.

CO4: Able to use different class diagrams, user interface designs, chart diagrams.

CO5: Able to differentiate different testing methodologiesand Design Engineering

SEMESTER V

TITLE OF THE COURSE : SOFTWARE ENGINEERING LAB
COURSE CODE :CSC502P

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Able to use software engineering basics.

CO2: To apply different existing tools on the basis of software requirements.

CO3: To use the different types of Life Cycle Models.

CO4: To build Data Flow Diagrams.

CO5: To construct different types of UML Diagrams.

SEMESTER V

TITLE OF THE COURSE: BASIC COMPUTER APPLICATIONS
COURSE CODE: LSC1

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Demonstrate basic understanding of computer hardware and software.

CO2: Apply skills and concepts for basic use of a computer.

CO3: Create personal, academic and business documents using MS office.

CO4: Create spread sheets, charts and presentations.

SEMESTER V

TITLE OF THE COURSE : OOPS USING JAVA **COURSE CODE :CCSC-505C**

On completion of this course, the students will be able to:

CO1: Able to understand the concept and underlying principles of Object-Oriented Programming.

CO2: Able to Understand the Basic concepts of Data types & Operators

CO3: Able to Implement Decision & Looping Statements

CO4: Able to Implement Object Oriented Programming Concepts like class, constructor, overloading in java.

CO5: Able to understand the concept of Inheritance and Exceptions Object-Oriented Programming.

SEMESTER V

TITLE OF THE COURSE : OOPS USING JAVA **COURSE CODE :CCSC-505P**

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Implementing class, constructor, method overloading, method overriding in java.

CO2: Implement different types of inheritance and interfaces in a Java program

CO3: Implement Multithreading, different types of exception handling mechanisms in Java.

CO4: Implement command line arguments

CO5: Implement class and object in java

SEMESTER V

TITLE OF THE COURSE : DATABASE MANAGEMENT SYSTEM
COURSE CODE: CCSC506C

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Able to have knowledge about database, Traditional File System.

CO2: Be able to Design a database using Relation models and Data Modeling

CO3: Store, retrieve data in database using Integrity constraints and Normal Forms.

CO4: Be able to implement various SQL queries

CO5: Be able to implement various Procedural SQL queries

SEMESTER V

TITLE OF THE COURSE: DATABASE MANAGEMENT SYSTEMS LAB
COURSE CODE: CCSC506P

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Have knowledge about database.

CO2: Be able to Design a database

CO3: Store, retrieve data in database using ER models.

CO4: Be able to implement various SQL queries

SEMESTER V

TITLE OF THE COURSE : WEB TECHNOLOGY COURSE CODE :CCSC507C

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the basic structure of a HTML design and develop a website using different text formatting tags, images, links, lists and tables.

CO2: Understand to style a webpage using CSS and Basic Concepts Of Java Scripts

CO3: Understand to style a webpage Using Objects in Java Script and DHTML

CO4: Understand the Basic Concepts of XML and Defining Data for Web Applications.

CO5: Understand the Concepts of JSP

SEMESTER III

TITLE OF THE COURSE :DATA BASE MANAGEMENT SYSTEM
COURSE CODE: CSC 301C

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Able to have knowledge about database, Traditional File System.

CO2: Be able to Design a database using Relation models and Data Modeling

CO3: Store, retrieve data in database using Integrity constraints and Normal Forms.

CO4: Be able to implement various SQL queries

CO5: Be able to implement various Procedural SQL queries

SEMESTER III

TITLE OF THE COURSE : DATABASE MANAGEMENT SYSTEMS LAB
COURSE CODE :CSC301P

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Able to implement various SQL queries.

CO2: Able to use no of constraints on data.

CO3: Store, retrieve data in database using Integrity constraints and Normal Forms.

CO4: Able to use different types of Joins.

CO5: Able to use different types of Functions.

SEMESTER III

TITLE OF THE COURSE : PROGRAMMING IN C COURSE CODE :CCSC 301C

After completion of the course, student will be able to;

CO1: Analyze a given problem and develop an algorithm to solve the problem

CO2: Understand the C tokens and control structures.

CO3: Understand to handle arrays and strings

CO4: Use the 'C' language constructs in the right way using pointers, structures and unions

CO5: Design, develop and test programs written in 'C' files.

SEMESTER III

TITLE OF THE COURSE :PROGRAMMING IN C LAB COURSE CODE :CCSC301P

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Develop a C program

CO2: Control the sequence of the program and give logical outputs

CO3: Implement strings in your C program

CO4: Manage I/O operations in your C program

CO5: Apply code reusability with functions and pointers

SEMESTER III

TITLE OF THE COURSE : PROBLEM SOLVING IN 'C' COURSE CODE :CSCT11B

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the evolution & functionality of Digital Computers and develop an algorithm for solving a given problem.

CO2: Understand tokens and control structures in C.

CO3: Understand arrays and strings and implement them.

CO4: Understand the right way of using functions, pointers, structures and unions in C

CO5: Develop and test programs written in C files

SEMESTER III

TITLE OF THE COURSE: PROBLEM SOLVING IN 'C' LAB
COURSE CODE: CSCP11B

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Apply logical skills to analyse a given problem

CO2: Design an algorithmic solution for a given problem

CO3: Write a maintainable C program according to coding standards for a given algorithm

CO4: Debug a given program

CO5: Execute the C program

SEMESTER III

TITLE OF THE COURSE : INFORMATION TECHNOLOGY COURSE CODE :CABT11A

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand fundamental concepts of a computer and its basic components

CO2: Understand basic functioning of an operating system and customizing Windows Desktop

CO3: Analyze type of softwares and programming languages

CO4: Have knowledge in basic Network and Data Communication Concepts

CO5: Understand the need of data mining and get familiarize with basics of new concepts like KDD, OLAP

SEMESTER III

TITLE OF THE COURSE : E–COMMERCE & WEB DESIGNING
COURSE CODE :CSCT11B

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the structure of HTML its basic tags

CO2: Implement various HTML tags for web page development

CO3: Understand about implementing forms and frames in web page designing

CO4: Gain knowledge in E- commerce and its business models

SEMESTER III

TITLE OF THE COURSE : WEB DESIGNING LAB COURSE CODE :CSCP11B

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Implement HTML tags.

CO2: Implementing lists and tables in web pages.

CO3: Implementing frames in web pages.

CO4: Implementing frames in web pages.

DEPARTMENT OF PG CHEMISTRY

SEMESTER: I:

NAME OF THE COURSE: GENERAL CHEMISTRY

COURSE OUTCOMES:
The student will be able to

CO1: Understand the significance of statistical rules and principles in quantitative analysis.

CO2: Assimilate the knowledge of various kinds of reactions, titrations and their applications.

CO3: Get equipped with the basic knowledge of Methods of purification, Drying techniques and Solvent extraction.

CO4: Get equipped with the knowledge of Chromatography techniques like as Adsorption, Column, Paper and Thin Layer chromatography

CO5: Test the conceptual knowledge gained in Gas Chromatography and High-Performance Liquid Chromatography

SEMESTER: I
NAME OF THE COURSE: INORGANIC CHEMISTRY-I
COURSE OUTCOMES:
The post graduate will be able to

CO1: Understand the postulates, basic theory and advanced theory of Quantum chemistry.
CO2: Take up the knowledge of preparation, structure, bonding aspects and chemical properties of metal pi complexes, compounds of non – transitional elements and also spectral properties, magnetic properties and applications of Lanthanides and actinide complexes

CO3: Assimilate the knowledge of non-valence cohesive forces, VSEPR theory, MO theory, MO diagrams and implications of MO theory.

CO4: Comprehend the bonding, structural aspects, properties and applications of complexes basing on CFT & MO theory and evidences in support of M-L bond.

CO5: Identify the significance of the thermodynamic stability of complexes, factors effecting, theories to explain stability and methods of determining the stability constant of complexes.

SEMESTER: I
NAME OF THE COURSE: ORGANIC CHEMISTRY-I
COURSE OUTCOMES:
The post graduate will be able to

CO1: Interpret the concept of aromaticity and the main properties of benzenoid and non-benzenoid aromatic compounds and distinguish between aromatic, non-aromatic and anti aromatic compounds by their structures and chemical consequence of aromaticity.
CO2: Understand the structure, stability, properties and generation of various reactive intermediates and reactive species and their role in organic reaction mechanisms.

CO3: Have a clear conceptual understanding of the nature of carbon-carbon multiple bond, various types of additions, with various reagents, mechanism, orientation and stereochemistry and also aknowledge some important synthetic reactions of CO and CN and crams rule

CO4: Understand the definition types of elimination reactions and differentiate between the various mechanisms, orientation rules and perceives factors favouring elimination over substitution.

CO5: Have knowledge and understanding of various types of aliphatic and aromatic nucleophilic substitution reactions, their mechanisms, stereochemistry and various factors affecting nucleophilic substitution reactions

SEMESTER: I
NAME OF THE COURSE: PHYSICAL CHEMISTRY-I
COURSE OUTCOMES:
The student will be able to
CO1: Understand the core areas of physical chemistry based around the theme of systems, states and process covered on thermodynamics.
CO2: Understand the important aspects of surface phenomenan and the physical chemistry involved in it.
CO3: Understand the basic concepts of electrochemical cells, concentration cells in producing electricity from chemicals.

CO4: Understand the theories of reaction rates, mechanisms of Collision theory, primary and secondary salt effects.

CO5: Understand the method of bond length, bond strength determination, identification of functional groups present in the molecule from the microwave and IR spectra of molecules.

SEMESTER: I

NAME OF THE COURSE: INORGANIC CHEMISTRY LAB
COURSE OUTCOMES:
The post graduate will be able to
CO1: Understand the importance of Inorganic qualitative analysis and its use in research and industry.
CO2: Comprehend the procedures / tests for the identification of cations and anions.
CO3: Interpret the need for separation of interfering radical in Inorganic qualitative analysis.
CO4: Understand the theories of reaction rates, mechanisms of Collision theory, primary and secondary salt effects.
CO5: Know that complexes can be synthesized by simple procedures.

SEMESTER: I

NAME OF THE COURSE: ORGANIC CHEMISTRY PRACTICAL

COURSE OUTCOMES:
The post graduate will be able to
CO1: Understand the importance of organic compound synthesis and its use in research and industry.
CO2: Understand the procedures for the different steps for the organic compound synthesis.

CO3: Understand the mechanisms for the synthesis of organic compounds in different steps.
CO4: Understand the recrystallisation of organic compound in various steps for the organic compound synthesis.

SEMESTER: II
COURSE OUTCOMES:
The graduate will be able to
CO1: Memorize the basic principles and theory involved in molecular absorption spectroscopy.
CO2: Comprehend the advanced concepts of molecular absorption spectroscopy.
CO3: Apply the knowledge of spectroscopy in establishing the structure of organic molecules.
CO4: Analyze the spectral data to ascertain the structure of unknown molecules.

SEMESTER: II
NAME OF THE COURSE: INORGANIC CHEMISTRY-II
SEMESTER: II
COURSE OUTCOMES:
The graduate will be able to
CO1: Memorizethe fundamental concepts of Metallic&non metallic clusters, Inorganic reaction mechanisms, organo metallic chemistry, electronic spectra& magnetic properties of complexes and bioinorganic chemistry
CO2: Comprehendthe basic and advanced concepts of metallic&non metallic clusters, Inorganic reaction mechanisms, organo metallic chemistry, electronic & magnetic properties of complexes and bioinorganic chemistry.
CO3: Applythe conceptual knowledge gained in the concepts of metallic & nonmetallic clusters, inorganic reaction mechanisms, organometallic chemistry, electronic &magnetic properties of complexes and bio inorganic chemistry in other fields of chemistry as well as in research.
CO4: Analyzethe role of metallic &non metallic clusters / cages, inorganic reaction mechanisms, organo metallic chemistry, electronic &magnetic properties of complexesand bio inorganic chemistry in understanding the similarities and differences among the concepts of chemistry.
CO5: Assess that how far the concepts of metallic&non metallic clusters, Inorganic reaction mechanisms, organo metallic chemistry, electronic & magnetic properties of complexes and bioinorganic chemistry are useful in rendering theoretical explanations for the concepts in chemistry.

SEMESTER: II
NAME OF THE COURSE: ORGANIC CHEMISTRY-II

COURSE OUTCOMES:
The student will be able to
CO1: Understand the basic and advanced concepts of stereochemistry, conformational analysis, green chemistry, nanochemistry and named reactions.
CO2: Apply the concepts related to stereochemistry, conformational analysis, green and nano chemistry in establishing the mechanism of the reaction.
CO3: Assess that how far the knowledge gained in stereochemistry, green chemistry and nanochemistry is useful in understanding the nature of product.
CO4: Evaluate the role of stereochemistry, green principles and nano chemistry in establishing the mechanism of a reaction as well as in other areas of chemistry.

SEMESTER: II

NAME OF THE COURSE: PHYSICAL CHEMISTRY-II
COURSE OUTCOMES:
The student will be able to
CO1: Remember the concepts of thermodynamics, polymer chemistry, electro chemistry, chemical kinetics, photo chemistry.
CO2: Understand the concepts of thermodynamics, polymer chemistry, electro chemistry, chemical kinetics, photo chemistry.
CO3: Apply the concepts of thermodynamics, polymer chemistry, electro chemistry, chemical kinetics, photo chemistryin research and other allied fields.
CO4: Analyze the role and significance of concepts of thermodynamics, polymer chemistry, electro chemistry, chemical kinetics, photo chemistry.
CO5: Evaluate the role of concepts of Symmetry and Group theory in chemistry and applications of group theory, construction of character tables.

SEMESTER: II
NAME OF THE COURSE: CHEMISTRY IN DAILY LIFE
COURSE OUTCOMES:
The student will be able to
CO1: Memorize the basic concepts related to chemistry in daily life like – chemistry Laboratory safety symbols, environmental chemistry, bioinorganic chemistry, vitamins, antibiotics and hormones.
CO2: Understand the concepts like chemistry Laboratory safety symbols, environmental chemistry, bioinorganic chemistry, vitamins, antibiotics and hormones.
CO3: Apply the knowledge gained in the concepts like chemistry Laboratory safety symbols, environmental chemistry, bioinorganic chemistry, vitamins, antibiotics and hormones in future job roles.
CO4: Analyze the role and significance of concepts of thermodynamics, polymer chemistry, electro chemistry, chemical kinetics, photo chemistry.
CO5: Evaluate the role of concepts of Symmetry and Group theory in chemistry and applications of group theory, construction of character tables.

NAME OF THE COURSE: ORGANIC CHEMISTRY PRACTICAL
SEMESTER: II
COURSE LEARNING OUTCOME(S): After studying this paper, students will acquire the knowledge of Organic chemistry practical

NAME OF THE COURSE: PHYSICAL CHEMISTRY PRACTICAL
SEMESTER: II
COURSE LEARNING OUTCOME(S): After studying this paper, students will acquire the knowledge of Inorganic and Physical chemistry experiments

SEMESTER: III
NAME OF THE COURSE: ADVANCED ORGANIC SPECTROSCOPY
COURSE OUTCOMES:
The student will be able to
CO1: Sumarize the principle, theory and advanced aspects of ^{1}HNMR, ^{13}C NMR, 2D NMR, ORD & CD spectroscopic techniques.
CO2: Display the knowledge gained in the areas of ^{1}HNMR, ^{13}C NMR, 2D NMR, ORD & CD spectroscopic techniques in chosen job role.

CO3: Interpret the spectral data of ^{1}HNMR, ^{13}C NMR, 2D NMR, ORD & CD in elucidating the structure of the molecule.
CO4: Assess that how far the spectral data of ^{1}HNMR, ^{13}C NMR, 2D NMR, ORD & CD are useful in establishing the structure of the molecule.

SEMESTER: III
NAME OF THE COURSE: ORGANIC REACTIONS & MECHANISMS & GREEN CHEMISTRY
COURSE OUTCOMES:
The student will be able to
CO1: Acquire sound knowledge of oxidations, reductions, molecular rearrangements, pericyclic reactions and photo chemistry.
CO2: Understand the concepts involved in oxidations, reductions, molecular rearrangements, pericyclic reactions and photo chemistry.
CO3: Apply the conceptual knowledge gained in oxidations, reductions, molecular rearrangements, pericyclic reactions and photo chemistry in chosen fields..
CO4: Analyse and categorise the various types oxidations, reductions, molecular rearrangements, pericyclic reactions and photo chemistry in a given reactions.

SEMESTER: III

NAME OF THE COURSE: ORGANIC SYNTHESIS

COURSE OUTCOMES:
The student will be able to
CO1: Memorize the concepts, principles and theories related to formation of C – C single bond, C – C double bond, Diel's Alder related reactions. Protecting groups and disconnection approach in organic synthesis.
CO2: Understand the role and significance of formation of C – C single bond,
C – C double bond, Diel's Alder related reactions. Protecting groups and disconnection approach in organic synthesis.
CO3: Apply the conceptual knowledge gained in formation of C – C single bond,
C – C double bond, Diel's Alder related reactions. Protecting groups and disconnection approach in organic synthesis as and when required.
CO4: Analyze the role of various reagents in carrying out the organic reactions like formation of C – C single bond,C – C double bond, Diel's Alder related reactions.Protecting groups and disconnection approach in organic synthesis.

SEMESTER: III
NAME OF THE COURSE: CHEMISTRY OF NATURAL PRODUCTS
COURSE OUTCOMES:
The student will be able to
CO1: Memorize the concepts related to Alkaloids, Terpenoids, Steroids, Flavonoids and Isoflavonoids and Pigments.
CO2: Understand the chemical role of Alkaloids, Terpenoids, Steroids, Flavonoids and Isoflavonoids and Pigments.
CO3: Execute the conceptual knowledge gained in the areas of Alkaloids, Terpenoids, Steroids, Flavonoids and Isoflavonoids and Pigments.
CO4: Analyze the role of methods involved in structure elucidation of Alkaloids, Terpenoids, Steroids, Flavonoids and Isoflavonoids and Pigments.

SEMESTER: III
NAME OF THE COURSE: POLYMER CHEMISTRY COURSE CODE: 20OECH - 2
COURSE OUTCOMES:
The graduate will be able to
CO1: Memorize the concepts related to polymer chemistry
CO2: Understand the concepts of polymer chemistry
CO3: Apply the knowledge gained in polymer chemistry in chosen job role.

SEMESTER: III
NAME OF THE COURSE: ORGANIC PREPARATIONS COURSE CODE: CH3L1
The graduate will be able to
CO1: Memorize the principle involved in various organic preparations.
CO2: Understand the mechanism involved in organic preparation.
CO3: Apply the knowledge of organic preparations in their chosen field

SEMESTER: III
NAME OF THE COURSE: MIXTURE ANALYSIS COURSE CODE: CH3L1
The graduate will be able to
CO1: Memorize the principle involved in various organic preparations.
CO2: Understand the mechanism involved in organic preparation.
CO3: Apply the knowledge of organic preparations in their chosen field.

IV SEMESTER

NAME OF THE COURSE: MOOCS – ORGANIC CHEMISTRY – I COURSE CODE: 20CH4T1

COURSE OUTCOMES:
The student will be able to
CO1: Recollect the concepts of stereochemistry, conformational analysis, CD & ORD, nature of bonding, aromaticity, chemical kinetics and Reactive intermediates.

CO2: Identify the role of stereochemistry, conformational analysis, CD & ORD, nature of bonding, aromaticity, chemical kinetics and reactive intermediates.

CO3: Demonstrate the knowledge of stereochemistry, conformational analysis, CD & ORD, nature of bonding, aromaticity, chemical Kinetics and reactive intermediates in chosen fields.

CO4: Analyse the conceptual knowledge in stereochemistry, conformational analysis, CD & ORD, nature of bonding, aromaticity, chemical kinetics and reactive intermediates in the reactions.

NAME OF THE COURSE: HETERO CYCLIC CHEMISTRY COURSE CODE: 20CH4T2A

COURSE OUTCOMES:
The student will be able to
CO1: Memorize the synthetic routes and reactions related to three, four, five, six membered and fused heterocyclic compounds.

CO2: Understand the concepts of synthesis and reactions of three, four, five, six membered and fused heterocyclic compounds.

CO3: Apply the conceptual knowledge gained in the synthesis and reactions of organic synthesis three, four, five, six membered and fused heterocyclic compounds as and when required.

CO4: Analyse and categorize the various reactions involved in the synthesis of three, four, five, six membered and fused heterocyclic compounds

NAME OF THE COURSE: GREEN CHEMISTRY COURSE CODE: 20CH4T2 B

COURSE OUTCOMES:

The student will be able to

CO1: Memorize the principles of green chemistry and concepts related to green organic synthesis.

CO2: Understand the role and significance of green organic synthesis.

CO3: Exercise the basic and advanced knowledge gained on green organic synthesis in chosen job role.

CO4: Analyse how far green methods are environmentally benign over conventional methods of synthesis.

NAME OF THE COURSE: TECHNIQUES FOR MODERN INDUSTRIAL APPLICATIONS COURSE CODE: 20CH4T3 A

COURSE OUTCOMES:

The student will be able to

CO1: Comprehend the concepts of purification methods and chromatographic methods.

CO2: Exercise the knowledge gained in purification and chromatographic techniques in their chosen job role.

CO3: Exercise that how far the purification and chromatographic techniques

are useful in assessing the purity of the compound.

CO4: Evaluate that how far a compound is purified / separated using purification and chromatographic techniques.

NAME OF THE COURSE: NANO CHEMISTRY COURSE CODE: 20CH4T3 B

COURSE OUTCOMES:

The student will be able to

CO1: Will be able to memorize the basic concepts of nanochemistry and nano materials.

CO2: Understand the basic and advanced concepts of nanochemistry and nano materials

CO3: Apply the knowledge gained in the field of nanochemistry as and when required.

CO4: Analyse the role of nanochemistry in various interdisciplinary sciences.

NAME OF THE COURSE: ORGANO METALLIC REAGENTS COURSE CODE: 20CH4T4

COURSE OUTCOMES:

The student will be able to

CO1: Memorize the synthetic roots and applications of organo metallic reagents.

CO2: Appreciate the methods of synthesis and reactivity of various organo metallic reagents

CO3: Investigate the conceptual knowledge in various organo metallic reagents in organic synthesis

CO4: Assess the role of specific organic reaction reagents in the synthesis

NAME OF THE COURSE: ORGANIC ESTIMATIONS COURSE CODE: 20CH4L1

COURSE OUTCOMES:

The student will be able to

CO1: Memorize the basic principles involved in organic quantitative analysis.

CO2: Understand the importance of organic quantitative analysis and their use on research and industry.

CO3: Exercise the procedure of quantitative analysis in chosen job roles.

CO4: Evaluate how far these methods are accurate in quantitative determinations.

NAME OF THE COURSE: PROJECT WORK COURSE CODE: 20CH4L2

COURSE OUTCOMES:

The student will be able to

CO1: Acquire required skills to implement theoretical knowledge gained.

CO2: Assimilate the required knowledge for future research through practical knowledge gained in the project work.

CO3: Gain the required ability to start up own industry.

CO4: Comprehend the ability to draft and communicate the practical work.

Department of Chemistry

SEMESTER: I

TITLE OF THE PAPER: INORGANIC & PHYSICAL CHEMISTRY
COURSE CODE: CHEP11A

COURSE OBJECTIVES:

1. To understand the preparation and structure of complex compounds.
2. To explain the properties and structure of d and f block elements and understand the theories of bonding in metals
3. To understand the symmetry in crystals and properties and structure of Solid state.
4. To understand the properties and structure of gaseous and liquid states.
5. To understand the properties of solutions

COURSE OUTCOMES:

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

CO1. Understand the basic concepts of p-block elements.

CO2. To compare the periodic properties of d and f block elements and explain the bonding and structures of metal carbonyls.

CO3. To understand the properties and structure of Solid state.

CO4. To understand the properties of gaseous and liquid states.

CO5. To explain the properties of Solutions.

TITLE OF THE PAPER: ORGANIC AND GENERALCHEMISTRY SEMESTER: II

COURSE OBJECTIVES:

1. To understand the basic concepts of alkanes & cycloalkanes.
2. To identify the difference between saturated and unsaturated hydrocarbons.
3. To learn the basic concepts of aromatic compounds and its reactivity.
4. To understand the chemistry of adsorption, colloid chemistry, HSAB principle and

Molecular Orbital theory.

5. To learn the fundamental aspects of stereo chemistry.

COURSE OUTCOMES:

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

CO1. Understand and explain the differential behaviour of organic compounds based on fundamental concepts learnt.

CO2. Formulate the mechanism of organic reactions by recalling and correlating the fundamental properties of the reactants involved.

CO3. Learn and identify many organic reaction mechanisms including Free Radical Substitution, Electrophilic Addition and Electrophilic Aromatic Substitution.

CO4. Understand the concepts of absorption and adsorption, colloidal chemistry and nature of Chemical Bonding.

CO5. Correlate and describe the stereo chemical properties of organic compounds and reactions.

SEMESTER: III

TITLE OF THE PAPER: ORGANIC CHEMISTRY & SPECTROSCOPY

COURSE CODE: CHET31A

COURSE OBJECTIVES:

1. Topics will include structure, stereochemistry, nomenclature, synthesis, properties, and reactions of the major classes of organic compounds. A mechanistic approach is used in the course to explain the reactions of these compounds.

2. Spectroscopy is general term used for the instrumental process by which information about molecular structure is obtained through careful analysis of absorption, scattering or emission of electromagnetic radiation by compounds.

COURSE OUTCOMES:

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

CO1: Remember the preparations, properties and reactions of halo alkanes, halo arenes and oxygen containing functional groups.-**PO1**

CO2: Understand preparation, properties and reactions of carbonyl compounds -**PO1**

CO3: Apply preparation methods for carboxylic acids and their derivatives-**PO1**

CO4: Analyze various molecules and polyatomic molecules using different spectroscopy methods-**PO1, PO7**

CO5: Evaluate the functional groups of different organic compounds- **PO1, PO7**

CO6: Create applications of spectroscopy for various organic molecules- **PO1, PO7**

SEMESTER: IV

TITLE OF THE PAPER: INORGANIC, ORGANIC AND PHYSICAL CHEMISTRY

COURSE CODE: CHE-401C

COURSE OBJECTIVE:

1. Main objectives of this paper is to give a basics, applications and updated knowledge for the students on Chemistry of Organometallic Compounds,

2. Carbohydrates Amino acids and proteins, Nitrogen Containing Functional Groups, Photochemistry and Thermodynamics.

COURSE OUTCOMES:

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

CO1: To learn about the laws of absorption of light energy by molecules and the subsequent photo chemical reactions.
CO2: To understand the concept of quantum efficiency and mechanisms of photochemical reactions

TITLE OF THE PAPER: INORGANIC&PHYSICALCHEMISTRY
COURSE CODE: CHE-402C

COURSE OBJECTIVE:

1. Main objectives of this paper is to give a basics, applications and updated knowledge for the students on Chemistry of Coordination Chemistry,

2. Inorganic Reaction Mechanism Stability of metal complexes, Bioinorganic Chemistry, Phase rule, Chemical Kinetics and Electrochemistry.

COURSE OUTCOMES:

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

CO1: Understand concepts of boundary conditions and quantization, probability distribution, most probable values, uncertainty and expectation value
CO2: Application of quantization to spectroscopy.
CO3: Various types of spectra and their use in structure determination.

DEPARTMENT OF ECONOMICS

COURSE OBJECTIVE:

1. It is primarily designed to help thestudents understand how Economics Essays and papers are constructed and kinds of information. they usually contain. It is helpful when it is comes to such things as constructing models.

2. Alternatively you can persue a moregeneral bacheral of arts in economics most of these programmes offered IB.A Micro Economics I B.Com(Gen&C.S) Business EconomicsIIB.A Macro Economics and IIIB.A Vth paper I ndian economic development and Andhra Pradesh Economy

SEMESTER – I

MICRO ECONOMICS CONSUMER BEHAVIOR

CO1: This course realizes the recent development in their scope of economics and Definitions.
CO2: To understand Micro-Macro Economics and Inductive and Deductive Methods

CO3: To understand the concepts of consumer behavior.

CO4: Able to understand the Demand analysis.

CO5: Able to understand ordinal approaches and Indifference curves.

SEMESTER –I

TITLE OF THE PAPER :BUSINESS ECONOMICS COURSE CODE: ECO-101CE

CO1: To understand the basics of Economics

CO2: The role of the demand in the price determination

CO3: Understand the measure- ment of elasticity of demands in different methods.

CO4: To analyse the cost and revenue concepts and to know about the profits.

CO5: how to equalize the cost in the production process

SEMESTER – II

TITLE OF THE PAPER :MICRO ECONOMICS CONSUMER PRODUCTION & PRICE THEORY

On completion of the course students are able to

CO1: To able to understand price determination of factors, and, various theory factors

CO2: Awareness of different markets structure.

CO3: Describe price and output determination of firms, and industry

CO4: Judging the factor pricing – demonstrate marginal productivity theory of distribution, theory of wages, identify different types of illustrate different theories of interest and profits

CO5: Describe the classical and Keynesian theories of interest

SEMESTER –II

TITLE OF THE PAPER : BUSINESS ECONOMICS
COURSE CODE : ECO-302GC

After successful completion of the course a student will be able to

CO1: To understand the basics of economics.

CO2: The role of the demand in the price determination

CO3: Understand the measure- ment of elasticity of dem- ands in different methods.

CO4: To analyse the cost and revenue concepts and to know about the profits.

CO5: How to equalize the cost In the production process

SEMESTER –II

TITLE OF THE PAPER: BUSINESS ECONOMICS
COURSE CODE: ECO-302COMP

After successful completion of the course a student will be able to

CO1: To understand the basics of economics.

CO2: The role of the demand in the price determination

CO3: Understand the measure- ment of elasticity of dem- ands in different methods.

CO4: To analyse the cost and revenue concepts and to know about the profits.

CO5: How to equalize the cost In the production process

SEMESTER – III

TITLE OF THE PAPER: MACRO ECONOMICS- NATIONAL INCOME, EMPLOMENT AND MONEY–

COURSE CODE: ECO-301C

Upon successful completion of the course a student will be able to

CO1: Able to understand the nature and scope of macro economics.

CO2: Able to understand different concepts of national income and methods to measure national income

CO3: Able to acquire the knowledge about the classical and Keynes theories of employment.

CO4: Able to understand Keynes theory of consumption function and working of multiplier and accelerate principle .

CO5: To understand the functions of money different theories of money.

SEMESTER – IV

TITLE OF THE PAPER : MACRO ECONOMICS-BANKING AND INTERNATIONAL TRADE

COURSE CODE: ECO-401C

Upon successful completion of this course , students should have

CO1: Able to understand various of trade cycle the economic instability and course and about the inflontion

CO2: Able to know functions of commercial and central banks , methods of credit control .

CO3: Able to know about the role of non –banking financial institutions and money markets

CO4: Able to know the function of SEBI and insurance

CO5: Able to understand operation of fisical and monetary policies.

SEMESTER –V

TITLE OF THE PAPER: - ECONOMIC DEVELOPMENT AND INDIAN ECONOMY

COURSE CODE: ECO-501C

Upon successful completion of this course students should have able understand

CO1: To able to understand economic growth and development and different growth models .Horrod Domor, Adamsmith restov theory etc Karal Marks able to understand some growth models

CO2: Development theories: theories of persistence of under development –stratagies for development balanced and unbalanced growth strategy ,development with unlimited supply of labour (lewis).

CO3: Economics of natural resourses and sustainable development :- this course will help in understanding that types of natural resoureses and their exploitation

CO4: Understand the population and economic growth understand basic futures of Indian economy . trand and composition of national income and for capital income ,occupational distribution ,basic demography futures. Study poverty , inequality and unemployement ; concuptuan and measurement issues –the Indian situation.

CO5: to analyze new economic policies (privatization liberalization and globalization) in india.

SEMESTER –V

TITLE OF THE PAPER :INDIAN AND ANDHRAPRADESH ECONOMY

COURSE CODE: ECO-502C

Upon successful completion of this course, students should have

CO1: to acquire knowledge regarding agriculture sector in India, its trends and productivity

CO2: to make the students to understand about Indian industry.

CO3: to understand forieging direct investment and service sector in India

CO4: they will be identifying the various objectives of pharming in india and its achievements.

CO5: To make students to understand about Andhra Pradesh economy and its progress

SEMESTER –VI

TITLE OF THE PAPER: AGRICUTURAL ECONOMICS
COURSE CODE : ECO-601 CE

On Completion of the course students are able to

CO1: Able to understand the nature of agricultural economics and also factory determining the agriculture.

CO2: To understand how the production principles are applicable in agriculture .

CO3: To know about the productivity trends in indian agriculture with special reference to Andhra Pradesh and also the agrirain reforms .

CO4: To know that the systems of farming and new agricultural strategies .

CO5: To know about the emerging trends in production, processing and marketing of agricultural products

SEMESTER –VI

TITLE OF THE PAPER: (CLUSTER ELECTIVE PAPER) AGRIBUSINESS ENVIRONMENT IN ANDHRAPRADESH

COURSE CODE: ECO-602 CE

After successful completion of the course a student will be able to

CO1: the role of agriculture in the development of Andhra Pradesh state.

CO2: importance in modern agriculture, Agricultural finance and problems In A.P state.

CO3: various types of crops, various benefits.

CO4: exports and imports of major Agricultural commodities.

CO5: structure of agri marketing and marketing policy, marketing legislation.

SEMESTER –VI (CLUSTER ELECTIVE PAPER)

TITLE OF THE PAPER: AGRICULTURAL OUTPUT MARKETING
COURSE CODE: ECO-603 CE

After successful completion of the course a student will be able to

CO1: to know about the agri markets like primary, secondary and terminal markets, regulated and co-operative markets..

CO2: to know about the marketing finance And different types of agricultural Commodities.

CO3: to know about the problems and Challenges in agricultural marketing's. i.e; support prices, market yards, rural
warehouses

CO4: to know about the role of various agencies like FCI,tobacco board etc.

CO5: to know about the international trade regarding exports and imports

DEPARTMENT OF ENGLISH

SEMESTER - I

ENGLISH PRAXIS COURSE-I

A COURSE IN COMMUNICATION AND SOFT SKILLS

Course objective:
The main objective of this course is to equip the learners with listening, speaking, reading, writing skills and also build up their ability to use Soft Skills in their professional and daily life effectively.

COURSE OUTCOMES:

At the end of the course, the learners will be able to:

CO 1. Gain more confidence in learning various kinds of listening techniques as well as create more effective strategies to improve one's ability to listen and to understand people. **PO2**

CO 2. Improve their speaking ability in English both in terms of fluency and comprehensibility and practice in using English to perform preliminary communicative functions required for their everyday social and professional interactions with others. **PO3**

CO 3. Explore basic elements of grammar and test their abilities in concord, modals, tenses, articles, prepositions, question tags and transformation of sentences. **PO7**

CO 4. Develop their written expression of thought and discover opportunities to build connections within the areas of punctuations, spelling and paragraph writing. **PO2**

CO 5. Formulate problem solving skills, making appropriate and responsible decisions, improve their attitude, emotional intelligence, telephone etiquette and interpersonal skills. **PO1**

SEMESTER - II

ENGLISH PRAXIS COURSE-II
A COURSE IN READING AND WRITING SKILLS
Course Structure and Syllabi under CBCS

COURSE OBJECTIVE: The main objective of this course is to facilitate the learners to acquire the linguistic competence essentially required in a variety of life situations and develop their intellectual, personal and professional abilities.

COURSE OUT COMES: At the end of the course the learners will be able to:

CO1: Acquaint the learner with some widely used words which appeal to be similar but are semantically different and also help them to realize the importance of meanings, and understand the grammatical structures in writing.

CO 2: Speak clearly, effectively and appropriately with correct pronunciation, pause and articulation of voice for a variety of audiences and purposes.

CO 3: Analyze, interpret, appreciate and comprehend the specified text and the contexts in terms of their content, purpose, and form.

CO 4: Think critically; convey their own interpretations, perspectives, producing new creative and artistic works following grammatical structures in oral and written assignment.

CO 5: Write effectively for a variety of professional and social settings adapting other writer's ideas as they explore and develop their own.

SEMESTER – III (CBCS)

ENGLISH PRAXIS COURSE-III
A COURSE IN CONVERSATIONAL SKILLS

COURSE OBJECTIVE:

The main objective of this course is to enrich student's abilities to speak fluently, participate confidently in any social interaction, face any professional discourse, demonstrate critical thinking and enhance conversational skills by deserving the professional interviews.

COURSE OUTCOMES:

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

CO1. Analyze interpret, appreciate and comprehend the specified text and the contexts in terms of their content, purpose and form.
CO2. Comprehend effectively for a variety of professional and social settings, adapting other writer's ideas as they explore and develop their own.

CO3. Engage in simple, common and basic social and academic conversations, demonstrating the ability to open and close a conversation and to ask for clarification, information or assistance, as well as agreeing/disagreeing and giving examples.
CO4. Convey their own interpretations by building dialogues and developing the learner's performance level in spoken English through the activities.
CO5. Acquaint the learner with the skills to debate, describe and role play.

DEPARTMENT OF ENVIRONMENTAL STUDIES

LIFE SKIL COURSE **CODE: CLSC001**

CO1: Realize the importance of environment, the goods and services of a healthy biodiversity, Dependence of humans on environment.
CO2: Evaluate the ways and ill effects of destruction of environment, population explosion on Ecosystems and global problems consequent to anthropogenic activities.
CO3: Discuss the laws/ acts made by government for environmental conservation and acquaint with international agreements and national movements and realize citizen's role in protecting environment and nature.

DEPARTMENT OF HISTORY

SEMESTER I

TITLE : ANCIENT INDIAN HISTORY & CULTURE (FROM EARLIEST TIMES TO 600 AD)
COURSE CODE : HIS-101C

CO1: To understand the sources of various periods to reconstruct Indian History –Identify geographical features of India.
CO2: Describe Prehistory – Pro to history – analyse early human settlements- Indus valley civilization.

CO3: Understand the Mouryan Administration art and architecture.

CO4: To Describe the Socio-Economic conditions of Kushanas, satavahanas, and Sangam Age.

CO5: Identify the Guptas period as golden Age all round development – Nalanda University.

SEMESTER II
TITLE: EARLY MEDIEVAL INDIAN HISTORY & CULTURE (FROM 600TO 1526 A.D)
COURSE CODE: HIS-201C

CO1: Evaluate the contribution of pushyabuthi dynasty.
CO2: Understand the Socio-Economic conditions of Badami and VengiChalukyans- their contribution to Art and Literature.
CO3: Identify the contribution of pallavas to Art and Architecture- Understand the local administration of Cholas.
CO4: Examine the Arab conquests of Sindh and battle of Tarain understands the foundation of the Delhi sultanate and administration.
CO5: To discuss the Bhakti movement- Identify cultural synthesis.

SEMESTER III

TITLE: LATE MEDIEVAL & COLONIAL HISTORY OF INDIA (FROM 1526 -1857A.D)
COURSE CODE: HIS-301C

CO1: Identify the conditions of India under the Mughal Empire.
CO2: Explain the administration and Art and Architecture of Mughals.
CO3: Analyze the rise of the Marathas and the contribution of shivaji.
CO4: Discuss the advent of Europens-Evaluate the Angle-French wars and Expansion of British power.
CO5: Analyse the land revenue systems of English.
CO6: Analyse the land revenue systems of English. Recognize the nature and consequences of 1857 Revolt. Identify the major sites of mutiny of 1857.

SEMESTER IV
TITLE: SOCIAL REFORMS AND FREEDOM STRUGGLE IN INDIA (FROM 1820-1947)
COURSE CODE: HIS-401C

CO1: To understand about the Socio-religious reform movement in 19th C. and self respect movements.
CO2: Realise the Lord Rippons local self government and Lord Curzon policy.
CO3: Establishment of Indian National congress and state the role of moderate and extremists.
CO4: Understand the Gandhi role in Indian National movementcomparison of Nationalist movement pre Gandhi – past Gandhi era.
CO5: Asses the partition of India and Integration of Native states into Indian union.

SEMESTER V
TITLE: AGE OF RATIONALISM AND HUMANISM- THE WORLD BETWEEN 15TH& 18TH CENTURIES.
COURSE CODE: HIS-501C

CO1: Describe the geographical discoveries-feudalism.
CO2: Assess the causes and effects of Renaissance, Reformation and Counter Reformation movements.
CO3: Narrate the emergence of National states and Glorious Revolution.
CO4: Assess the causes and effects of American Revolution.
CO5: Realize the causes and results of French revolution and the revolution gave Liberty, Fraternity, and Equality.

SEMESTER V
TITLE: HISTORY & CULTURE OF ANDHRA DESA (FROM 12TH TO 19TH C. AD)
COURSE CODE: HIS-502C
CO1: To understand the Socio-Economic and cultural condition of Andhra during Kakatiyas rule
CO2: Identity the contribution of Vijayanagara rulers to Art and Architecture, literature and greatness of SrikrishnaDevaraya
CO3: To narrate the Socio –Economic condition Andhras during the Qutubshahi rule and their Administration.
CO4: Describe the advent of Europeans in Andhra
CO5: Evaluate the establishment of British rule in Andhra and 1857 revolt.

SEMESTER VI
TITLE: HISTORY OF MODERN EUROPE (FROM 19TH CENTURY TO 1945 A.D)
COURSE CODE: HIS-601C

CO1: Realize the causes and results of Industrial revolution
CO2: To understand the efforts of Bismark for the Unification of Germany andMazini, Count covour Garibaldi. For the unification of Italy.
CO3: To understand the causes and results for the Istworld war and formation of league of Nations.
CO4: Examine the Nazism and Fascism in Germany and Italy.
CO5: Understand the causes and results of Second World War and establishment of UNO.

SEMESTER VI

TITLE: CULTURAL TOURISM IN ANDHRA PRADESH (PROJECT WORK)
COURSE CODE: HIS-602C

CO1: To expose the Students to the scope and potential available in the Tourism Industry
CO2: To impart specific skills such as Travel & Tourist guide
CO3: To Know the importance of various Heritage places
CO4: To understand the types of tourism
CO5: Tourism provides Cultural Social and Economic knowledge about other countries

SEMESTER VI
TITLE: POPULAR MOVEMENTS IN ANDHRA DESA (1848-1956 AD)
COURSE CODE: HIS-603 C
CO1: To understand the Social Reform Movement and Self Respect movements in Andhra Desa.
CO2: To describe the Freedom Movement in Andhra Desa
CO3: To Identify the role of Andhra in Freedom Movement
CO4: Examine the movement for separate Andhra State.
CO5: Narrate the Formation of Andhra Pradesh in 1956.

SEMESTER VI

TITLE: CONTEMPORARY HISTORY OF ANDHRA PRADESH (1956-2014 AD)
COURSE CODE: HIS-604 C

CO1 To understand the Socio-Economic changes in Andhra Pradesh and emergence of Telugu Desam Party
CO2: To Evaluate the Leftist activities and present status of Communists in Andhra Pradesh **CO3**: Examine the Dalit Movements in Andhra Pradesh
CO4: Realize the Jai Telangana, Jai Andhra movements in Andhra State
CO5: Assess the causes for the Formation of TelanganaRastraSamithi and Bifurcation of Andhra Pradesh in 2014.

DEPARTMENT OF HINDI

SEMESTER – I
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SEMESTER III
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DEPARTMENT OF MATHEMATICS

TITLE OF THE COURSE: DIFFERENTIAL EQUATIONS COURSE CODE: MATT11A

COURSE OUTCOMES:

CO1: Understand how to differentiate linear and non-linear differential equations.

CO2: different methods for solving differential equations of first order but not of first degree.

CO3: Will be able to find the solution of higher-order linear differential equations with constant coefficients.

CO4: Use the method of "variation of parameters" to find the solution of higher-order linear differential equations with variable coefficients and solve the Cauchy-Euler equations

TITLE OF THE COURSE: REAL ANALYSIS COURSE CODE: MATT21B

COURSE OUTCOMES:

CO1: Understand the concepts of limits, Continuity, Discontinuity, Uniform Continuity

CO2: Use the definitions of convergence as they apply to sequences, series, and functions

CO3: Apply the Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis

CO4: Identify Riemann Integral functions

TITLE OF THE COURSE: GROUP THEORY COURSE CODE: MAT 301

COURSE OUTCOMES:

CO1: Will be able to assess properties implied by the definitions of groups

CO2: Will be able to use various canonical types of groups (including cyclic groups and groups of permutations)

CO3: Will be able to analyze and demonstrate examples of subgroups, normal subgroups and quotient groups

CO4: Will be able to use the concepts of isomorphism and homomorphism for groups

TITLE OF THE COURSE: REAL ANALYSIS COURSE CODE: MAT 401

COURSE OUTCOMES:

CO1: Understand the concepts of limits, Continuity, Discontinuity, Uniform Continuity

CO2: Use the definitions of convergence as they apply to sequences, series, and functions

CO3: Apply the Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis

CO4: Identify Riemann Integral functions

TITLE OF THE COURSE: LINEAR ALGEBRA COURSE CODE: MAT 401

COURSE OUTCOMES:

CO1: Recognize the concepts of the terms span, linear independence, basis , dimension and apply these concepts to various vector spaces and subspaces

CO2: Will be able to find the linear independent and dependent vectors to linear transformations

CO3: Use matrix algebra and the related matrices, Compute and use eigenvectors and eigenvalues
CO4: Will be able to find the unit vectors by inner produc spaces and Determine and use orthogonality.

TITLE OF THE COURSE: RING THEORY AND VECTOR CALCULUS
COURSE CODE: MAT 501

COURSE OUTCOMES:

CO1: Attain knowledge in Rings, Sub rings, Ideals

CO2: Further learn homomorphisms and polynomial rings

CO3: Will be able to compute and analyze the vector-valued functions of a real variable and their curves and in turn the geometry of such curves including curvature, torsion and the Frenet-Serre frame and intrinsic geometry

CO4: Will be able to compute and analyze the integral ideas of the functions defined including line, surface and volume integrals - both derivation and calculation in rectangular, cylindrical and spherical coordinate systems and understand the proofs of each instance of the fundamental theorem of calculus

TITLE OF THE COURSE: LINEAR ALGEBRA COURSE CODE: MAT 502

COURSE OUTCOMES:

CO1: Recognize the concepts of the terms span, linear independence, basis , dimension and apply these concepts to various vector spaces and subspaces

CO2: Will be able to find the linear independent and dependent vectors to linear transformations
CO3: Use matrix algebra and the related matrices, Compute and use eigenvectors and eigenvalues
CO4: Will be able to find the unit vectors by inner produc spaces and Determine and use orthogonality.

TITLE OF THE COURSE: NUMERICAL ANALYSIS COURSE CODE: MAT 601

COURSE OUTCOMES:

CO1: Analyze and detect different form of errors and also will be able to solve Algebraic and Transcendental equations using different methods.

CO2: Interpolate the functions within the range using equally and un equally spaced points

CO3: Use Upon completion of this module the student should : Understand the Least Squares Method, Be able to curve fit data using several types of curves(straight line, second degree parabola, power curve, exponential curve)

CO4: Will be able to solve linear system of equations with ill conditioned method and approximation methods

TITLE OF THE COURSE: LAPLACE TRANSFORMS AND FOURIER TRANSFORMA COURSE CODE: MAT 601

COURSE OUTCOMES:

CO1: Will be able to find the Laplace transform of a function by definition and by use of a table

CO2: Will be able to find the inverse Laplace transform of a function

CO3: Will be able to find the convolution of two functions and the transform of a convolution

CO4: Will be able to solve linear differential equations with constant coefficients and unit step input functions using the Fourier transform and Fourier Sine and cosine functions

TITLE OF THE COURSE: ADVANCED NUMERICAL ANALYSIS COURSE CODE: MAT 603

COURSE OUTCOMES:

CO1: Will be able to derive numerical methods for approximating the solution of problems of continuous mathematics

CO2: To obtain numerical approximations to the first and second derivatives of certain functions • Calculate a definite integral using an appropriate numerical method

CO3: Implement a variety of numerical algorithms using appropriate technologyCompare 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

CO4: To solve the solution of a linear system of equations using direct or iterative methods. • To solve the selected class of differential equations using Taylor, Picards, Euler‘s, Runge Kutta methods

TITLE OF THE COURSE: APPLICATIONS OF ADVANCED NUMERICAL ANALYSIS WITH " C" PROGRAMME PROJECT.

COURSE CODE: MAT 604

COURSE OUTCOMES:

CO1: Will be able to compute and analyze the integral ideas of the applications of Advanced Numerical Analysis. To exicute the " C " programme by depending the applications of Advanced Numerical Analysis.

DEPARTMENT OF TELUGU

I SEMESTER
TITLE OF THE COURSE: TELUGU **COURSE CODE: TELT11A**
COURSES: B.A., B.Com., & B.Sc.

కోర్స్ అవుట్ కమ్స్:

ఈ కోర్సు విజయవంతంగా ముగించాక, విద్యార్థులు క్రింది అభ్యసన ఫలితాలను పొందగలరు.

1. ప్రాచీన తెలుగు సాహిత్యం యొక్క ప్రాచీనతను, విశిష్టతను గుర్తిస్తారు. తెలుగు సాహిత్యంలో ఆదికవి నన్నయ కాలం భాషా సంస్కృతులను, ఇతిహాసకాలం నాటి రాజనీతి విషయాలపట్ల పరిజ్ఞానాన్ని పొందగలరు.
2. శివకవుల కాలంనాటి మత పరిస్థితులను, భాషా విశేషాలను గ్రహిస్తారు. తెలుగు సుదీకారం, సామెతలు, లోకోక్తి మొదలైన భాషాంశాల పట్ల పరిజ్ఞానాన్ని పొందగలరు.
3. తిక్కన భారతంనాటి మత, ధార్మిక పరిస్థితులను, తిక్కన కవితా శిల్పాన్ని, నాటకీయతను అవగాహన చేసుకోగలరు
4. పోతన అద్భుత కథాకథన శిల్పం, సజీవపాత్ర చిత్రణ, శబ్దాలంకారాల ప్రయోగం మొదలగు విభిన్న రీతుల అభిరుచిని పొందగలరు. మొల్ల కవిత్వంలోని వీనుల విందైన పదాలు, పాత్రల మనోభావాల చిత్రణ గుర్తించగలరు.
5. తెలుగు పద్యం స్వరూప-స్వభావాలను, సాహిత్యాభిరుచిని పెంపొందించుకుంటారు. ప్రాచీన కావ్యభాషలోని వ్యాకరణాంశాల అధ్యయనం చేయడం ద్వారా భాషా సామర్థ్యాన్ని, రచనలో మెలకువలను గ్రహించగలరు.

లెర్నింగ్ ఆబ్జెక్టివ్స్:

1. తెలుగు భాషాసాహిత్యాల పట్ల ప్రీతి, మమకార, ప్రాచీన కాలంలోని రాజనీతి పట్ల అవగాహన కల్గుతుంది.
2. ప్రాచీన కాలం నాటి చరిత్ర, సంస్కృతి ఆచార సంప్రదాయాల పట్ల ఆసక్తి కల్గుతుంది.
3. అలనాటి ధర్మ, మత పరిస్థితులు, నైతిక విలువల పట్ల అవగాహన ఏర్పడుతుంది.
4. పూర్వ కవుల సజీవ పాత్రల సృష్టి, వివిధ శబ్ద ప్రయోగాల పట్ల అభిరుచి కల్గుతుంది.
5. కావ్య భాషలోని భాషా పరిజ్ఞానం, వ్యాకరణాంశాలు, వివిధ రచనలలోని మెలకువలను తెలుసుకుంటారు.

II SEMESTER
TITLE OF THE COURSE: TELUGU **COURSE CODE: TELT21A**
COURSES: B.A., B.Com., & B.Sc.

TELUGU-II

ఆధునిక తెలుగు సాహిత్యం

యూనిట్ల సంఖ్య: 5

కోర్స్ అవుట్ కమ్స్:

ఈ కోర్సు విజయవంతంగా ముగించాక, విద్యార్థులు క్రింది అధ్యయన ఫలితాలను పొందగలరు.

1. ఆంగ్ల భాష ప్రభావం కారణంగా తెలుగులో వచ్చిన ఆధునిక సాహిత్యాన్ని, దాని విశిష్టతలను గుర్తిస్తారు.

2. సమకాలీన ఆధునిక సాహిత్య ప్రక్రియలైన "వచన కవిత్వం, కథ, నవల, నాటకం" విమర్శలపై అవగాహన పొందుతారు

3. భావకవిత, అభ్యుదయ కవిత్వాల లక్ష్యాలను గూర్చిన జ్ఞానాన్ని పొందుతారు. ఇంకా అస్తిత్వవాదం, ఉద్యమాల ఆవశ్యకతను గుర్తిస్తారు.

4. కథా సాహిత్యం ద్వారా సామాజిక చైతన్యాన్ని పొందుతారు. సిద్ధాంతాల ద్వారా కాకుండా, వాస్తవ పరిస్థితులను తెలుసుకోవడం ద్వారా సిద్ధాంతాన్ని సమీక్షించుకోగలరు.

5. ఆధునిక తెలుగు కల్పనా సాహిత్యం ద్వారా సామాజిక, సాంస్కృతిక, రాజకీయ చైతన్యాన్ని పొందుతారు.

లెర్నింగ్ ఆబ్జెక్టివ్స్:

1. ఆధునిక భాషా సాహిత్యము నందలి ప్రక్రియల పట్ల ప్రీతి, మమకారం, ఆసక్తి కల్గుతుంది.

2. ఆధునిక కవిత్వము పట్ల అవగాహన పద్ధతులు, ప్రసిద్ధులైన కవుల, రచయితల రచనా శైలి తెలుస్తాయి.

3. ఆధునిక సాహిత్య ప్రక్రియలైన కథ, నవల, నాటకం, విమర్శ మొదలగు సాహిత్య ప్రక్రియలలో రచనా మెలకువలు తెలుసుకోవటం జరుగుతుంది.

4. ఆధునిక సాహిత్యంలోని వివిధ కొత్త పదబంధాలు, శబ్ద ప్రయోగవైచిత్రి, భాషా పరిజ్ఞానాన్ని తెలుసుకుంటారు.

5. కాలానుగుణంగా సాహిత్యం తన స్వరూపాన్ని ఏవిధముగా మార్చుకుంటుందో విద్యార్థులు క్షుణ్ణంగా పరిశీలించే అవకా కల్గుతుంది.

III SEMESTER
TITLE OF THE COURSE: TELUGU **COURSE CODE: TELT01A**
COURSES: B.A., B.Com., & B.Sc.

యూనిట్ నంఖ్య: 5
కోర్స్ అవుట్ కమ్స్:
ఈ కోర్సు విజయవంతంగా ముగించాక, విద్యార్థులు క్రింది అభ్యస
1. తెలుగు సాహిత్య అభ్యసనం ద్వారా నేర్చుకున్న నైపుణ్యాలను, సృజనాత్మక
2. విద్యార్థులు భాషాతత్వాన్ని, ఆవశ్యకతను, ప్రాధాన్యాన్ని గుర్తిస్తారు.
3. భాషా నైపుణ్యాలను అలవర్చుకోవడం, వినియోగించడం నేర్చుకుంటారు.
4. ప్రాచీన పద్య రచనతోపాటు ఆధునిక కవిత, కథ, వ్యాసం మొదలైన సాహి
5. సృజన రంగం, ప్రసార మాధ్యమాలు, అనువాద రంగాల పట్ల విద్యార్థుల

లెర్నింగ్ ఆబ్జెక్టివ్స్:
1. సృజనాత్మక నైపుణ్యాల పట్ల విద్యార్థులకు ఆసక్తి కల్గుతుంది.

Department of Physics

SEMESTER - I

MECHANICS, WAVES & OSCILLATIONS CODE: PHYT11B

COURSE OBJECTIVES:-

1. Understand the vectorial and scalar representation of forces.
2. Analyse the properties of surfaces and solids in relation to moment of inertia.
3. Illustrate the laws of motion, kinematics of motion and their inter-relationship.
4. Students will learn to use graph functions and fit curves.
5. Students will be able to solve oscillating system problems.

COURSE OUTCOMES :

On successful completion of this course, the students will be able to:

CO1: Understand Newton's laws of motion and motion of variable mass system and its

Application to rocket motion and the concepts of impact parameter, scattering cross

Section.

CO2: Apply the rotational kinematic relations, the principle and working of gyroscope and Its applications and the processional motion of a freely rotating symmetric top. Comprehend the general characteristics of central forces and the application of Kepler's laws to describe the motion of planets and satellite in circular orbit through the study of law of Gravitation.

CO3: Understand postulates of Special theory of relativity and its consequences such as Length contraction, time dilation, relativistic mass and mass-energy equivalence. Examine phenomena of simple harmonic motion and the distinction between Undamped, damped and forced oscillations and the concepts of resonance and quality Factor with reference to damped harmonic oscillator.

C**O**4: Appreciate the formulation of the problem of coupled oscillations and solve them to Obtain normal modes of oscillation and their frequencies in simple mechanical systems.

CO5: Figure out the formation of harmonics and overtones in a stretched string and acquire Knowledge on Ultrasonic waves, their production and detection and their applications In different fields.

SEMESTER –II

TITLE OF THE PAPER :- WAVES OPTICS
COURSE CODE :- PHYT21B

COURSE OBJECTIVES:

1. To help students to understand the nature of light, its propagation and interaction with matter which is essential to constantly emerging newest technologies.
2. To create interest among the students about the modern communication systems by studying wave optics.
3. Students will be able to understand applications of interference, diffraction, lasers in real life situations .

COURSE OUTCOMES: On successful completion of this course, the student will be able to:

CO1: Understand the phenomenon of interference of light and its formation in (i) Lloyd's single mirror due to division of wave front and (ii) Thin films, Newton's rings and Michelson interferometer due to division of amplitude.

CO2: Distinguish between Fresnel's diffraction and Fraunhoffer diffraction and observe the diffraction patterns in the case of single slit and the diffraction grating.

CO3: Describe the construction and working of zone plate and make the comparison of zone plate with convex lens.

CO4: Explain the various methods of production of plane, circularly and polarized light and their detection and the concept of optical activity..

CO5: Comprehend the basic principle of laser, the working of He-Ne laser and Ruby lasers and their applications in different fields.

CO6: Explain about the different aberrations in lenses and discuss the methods of minimizing them.

CO7: understand the basic principles of fiber optic communication and explore the field of Holography and Nonlinear optics and their applications.

SEMESTER- III

THERMODYNAMICS AND RADIATION PHYSICS COURSE CODE : **PHY 301C**

COURSE OBJECTIVES:-

1. Introduce the microscopic approach through kinetic theory of gases and basic statistical thermodynamics
2. Give the fundamentals of thermodynamic systems, the laws of thermodynamics and their application to thermodynamic problems
3. Provide essential tools to analyze Carnot engine, heat engines and refrigerators with the help of their thermodynamic cycles
4. Highlight the use of mathematical methods to derive thermodynamic relationships
5. Analyses thermal conductivity and black body radiation

COURSE OUTCOMES:-

Upon successful completion of this course, students should have the knowledge and skills to:

CO1: Understand the microscopic behaviour of molecules, interactions and the concepts of transport phenomena of heat transfer, mass transfer and momentum transfer.

CO2: State the First Law and define heat, work, thermal efficiency and the difference between various forms of energy and describe energy exchange processes, reversible and irreversible process.

CO3: Derive thermodynamic potentials from first principles and derive the Maxwell relations.

CO4: Understand very low temperatures like the concept of Joule Thomson effect, Lique faction of gases and the properties at very low temperatures.

CO5: Understanding of Black-body radiation as the thermal electromagnetic radiation and the statistical principles to the mechanical behavior of large number of small particles.

SEMESTER : IV

ELECTRICITY, MAGNETISM AND ELECTRONICS CODE :- PHY 401C

COURSE OBJECTIVE :

1. Understand the magnetic effects of electric current.

2. Study the unification of electric and magnetic phenomena.

3. To gain knowledge about Maxwell's equations and EM waves

4. develop competence in using laboratory instruments to carry out experiments to study different electromagnetic phenomena, that will enhance student's class room learning .

COURSE OUTCOMES : On successful completion of this course, the students will be able to:

CO Understand the Gauss law and its application to obtain electric field in different cases and formulate the relationship between electric displacement vector, electric polarization, Susceptibility, Permittivity and Dielectric constant.

CO1: Distinguish between the magnetic effect of electric current and electromagnetic induction and apply the related laws in appropriate circumstances.

CO2: Understand Biot and Savart's law and Ampere's circuital law to describe and explain the generation of magnetic fields by electrical currents.

CO3: Develop an understanding on the unification of electric and magnetic fields and Maxwell's equations governing electromagnetic waves.

CO4: Phenomenon of resonance in LCR AC-circuits, sharpness of resonance, Q factor, Power factor and the comparative study of series and parallel resonant circuits.

CO5: Describe the operation of p-n junction diodes, zener diodes, light emitting diodes and transistors

CO6: Understand the operation of basic logic gates and universal gates and their truth tables.

SEMESTER: IV

MODERN PHYSICS **CODE :- PHY - 402 C**

COURSE OBJECTIVES:

1. To learn the concepts in Atomic Physics.

2. Review the experiments that led development of quantum theory

3. Understand the underlying foundations and basic principles of quantum mechanics

4. Impart knowledge of the nuclear processes that yield nuclear energy

COURSE OUTCOMES :

On successful completion of this course, the students will be able to,

CO1: Remember the different atomic models and basic knowledge of spectroscopy

CO2: Understand the theory and application of microwave, infrared and Raman spectroscopy

CO3: Apply non- relativistic Schrödinger wave mechanics to a variety of potentials in one and three dimensions.

CO4: Analyse the prerequisite in a molecule towards its Rotational and vibrational activity

CO5: Examine the basic properties of nuclei, characteristics of Nuclear forces, salient features .

SEMESTER: V

ELECTRICITY, MAGNETISM AND ELECTRONICS **CODE: - PHY 501 C**

COURSE OBJECTIVE:

1. Understand the magnetic effects of electric current.

2. Study the unification of electric and magnetic phenomena.

3. To gain knowledge about Maxwell's equations and EM waves

4. Develop competence in using laboratory instruments to carry out experiments to study different electromagnetic phenomena that will enhance student's class room learning.

COURSE OUTCOMES : On successful completion of this course, the students will be able to:
CO1: Understand the Gauss law and its application to obtain electric field in different cases and formulate the relationship between electric displacement vector, electric polarization, Susceptibility, Permittivity and Dielectric constant.

CO2: Distinguish between the magnetic effect of electric current and electromagnetic induction and apply the related laws in appropriate circumstances.

CO3: Understand Biot and Savart's law and Ampere's circuital law to describe and explain the generation of magnetic fields by electrical currents.

CO4: Develop an understanding on the unification of electric and magnetic fields and Maxwell's equations governing electromagnetic waves.

CO5: Phenomenon of resonance in LCR AC-circuits, sharpness of resonance,Q factor, Power factor and the comparative study of series and parallel resonant circuits.

CO6: Describe the operation of p-n junction diodes, zener diodes, light emitting diodes and transistors

CO7: Understand the operation of basic logic gates and universal gates and their truth tables.

SEMESTER : V

TITLE OF THE PAPERMODERN PHYSICS
COURSE CODE :- PHY - 502 C

COURSE OBJECTIVES:

1. To learn the concepts in Atomic Physics.

2. Review the experiments that led development of quantum theory

3. Understand the underlying foundations and basic principles of quantum mechanics

4. impart knowledge of the nuclear processes that yield nuclear energy

COURSE OUTCOMES :

On successful completion of this course, the students will be able to,

CO1: Remember the different atomic models and basic knowledge of spectroscopy

CO2: Understand the theory and application of microwave, infrared and Raman spectroscopy

CO3: Apply non- relativistic Schrödinger wave mechanics to a variety of potentials in one and three dimensions.

CO4: Analyse the prerequisite in a molecule towards its Rotational and vibrational activity

CO5: Examine the basic properties of nuclei, characteristics of Nuclear forces, salient features.

SEMESTER: VI

TITLE OF THE PAPER: ANALOG AND DIGITAL ELECTRONICS
COURSE CODE: **PHY- 601 GE**

COURSE OBJECTIVES:

• To understand the operation of the various bias circuits of MOSFET and Analyze and design MOSFET bias circuits.

• To understand the operation and design of operational amplifier circuits.

• To understand the design and analysis of different multiplexers.

• To understand the different types of flip-flops circuits.

COURSE OUTCOMES: On successful completion of this course, the students will be able to:

CO1: Understand the fundamental concepts (construction, working and drain & transfer characteristics) of semiconductor devices, FET& MOSFET. Apply the knowledge in the construction of electronic devices.

CO2: Understand the operation of basic differential amplifiers and their applications in Linear Integrated circuits. Learn the basic function of the Operational Amplifier (IC741), its Ideal and Practical characteristics and its parameters (Offset voltages, CMRR, Slew rate and Virtual Ground)

CO3: Understand the function of the Operational Amplifier and apply it to its applications such as inverting and non-inverting amplifiers. Apply the knowledge in designing the various digital devices

CO4: Understand, analyze, design and troubleshoot a broad range of combinational circuits (Multiplexer, De multiplexer, Encoder and Decoder) using digital ICs.

CO5: Understand the construction and operation of flip flops (RS, Clocked SR, JK, D, T, and Master-Slave).

SEMESTER: VI

TITLE OF THE PAPER: INTRODUCTION TO MICROPROCESSOR AND MICROCONTROLLER
COURSE CODE: **PHY – 602 CE**

COURSE OBJECTIVES:

The objective of this course is to become familiar with the architecture and the instruction

1. set of an Intel microprocessor.
2. Assembly language programming will be studied as well as the design of various types of digital and analogue interfaces.
3. Understand the architecture of 8085 and 8051.

COURSE OUTCOMES:

On successful completion of this course, the students will be able to:

CO1: To design and build an appropriate 'architecture' or program design to apply to a particular situation and to describe some of the characteristics of RISC and CISC architectures

CO2: To understand what is a microcontroller, microcomputer, embedded system and to Become familiar with the programming environment used to develop embedded systems

CO3: To know the major classes of programming languages with their characteristics, perform conversions between binary, octal/hexadecimal, and decimal number systems andperform the basic arithmetic operations in these number systems

CO4: To understand key concepts of embedded systems like IO, timers, interrupts interaction with peripheral devices

CO5: To design a system, component, or process to meet desired needs within realistic constraints and also Learn debugging techniques for an embedded system .

SEMESTER: VI

TITLE OF THE PAPER: COMPUTATIONAL METHODS AND PROGRAMMING
COURSE CODE: PHY – 603 CE

COURSE OBJECTIVES:-

1. To develop programming skills using the fundamentals and basics of C Language.
2. To enable effective usage of arrays, structures, functions, pointers and to implement the memory management concepts.
3. To teach the issues in file organization and the usage of file systems.
4. To impart adequate knowledge on the need of programming languages and problem solving techniques.

COURSE OUTCOMES :-

On successful completion of this course, the students will be able to:

CO1: Understand the basic structure of the C - Programming, declaration and Usage of Variables, Constants and Operators.

CO2: Understand a Programme that solves this problem and generate a set of input test values to perform a design walkthrough to verify your design sequence

CO3: Understand a multifunction programme like elements of user-defined functions, return values and their types, function declaration and category of functions

CO4: Solve equations containing exponential, logarithmic, quadratic, linear and non-linear equations
CO5: Understand the common numerical methods and how they are used to obtain approximate solutions .

SEMESTER : VI

TITLE OF THE PAPER: ELECTRONIC INSTRUMENTATION
COURSE CODE : PHY – 604 CE

COURSE OBJECTIVES: -

1. Explain basic concepts and definitions in measurement.
2. Describe the bridge configurations and their applications.
3. Elaborate discussion about the importance of signal generators and analyzers in Measurement.

COURSE OUTCOMES:-

On successful completion of this course, the students will be able to:

CO1: Understand the basic measurements of Instruments (accuracy, precision, range, resolution, sensitivity and errors). Understand the theory, working principle, specifications and significance of Multimeter.

CO2: Apply the knowledge in calibrating the voltmeter, ammeter

CO3: Test and troubleshoot electronic circuits (with respect to input impedance and sensitivity) in measuring voltage with Multimeter and Electronic Voltmeter

CO4: Describe the function of basic building blocks of Cathode Ray Oscilloscope. Measure the appropriate parameters (Voltage, Time Period, Frequency and Phase angle)

CO5: Understand the fundamental laws of kirchoff's laws and theory of Wheat stone's Bridge . Knows the working of Digital Voltmeter. Build the different bridges to measure relevant parameters (Resistance, Inductance and Capacitance)

DEPARTMENT OF POLITICAL SCIENCE

SEMESTER – I

PAPER TITLE : BASIC CONCEPTS OF POLITICAL SCIENCE
COURSE CODE: POL – 101C

COURSE OUTCOMES

CO1: Understand the Nature, Definition, Significance and Scope of Political Science
CO2: To learnTheories of Origin Of The Stateand Essential Elements of State

CO3: Get exposed Sovereignty- Characteristics and Kinds of sovereignty

CO4: Describe thelaw,liberty, equality and their Sources ,features and kinds

CO5: Create awareness about Women's Rights, Safeguards of Rights and Duties of citizen.

SEMESTER – II
PAPER TITLE : CONCEPTS THEORIES AND INSTITUTIONS
COURSE CODE: POL – 201C

COURSE OUTCOMES

CO1:Come to know about Democracy- forms, Conditions necessary for the success, Merits and demerits of democracy
CO2: Understand the Ideologies- Individualism, Anarchism Fascism, Marxism and Gandhism and Theory of Separation of Powers.
CO3: Know about Legislature - Powers and Functions, Stages of making the Law.
CO4: Examine the Importance and functions of Executive i.e Parliamentary- Executive, presidential executive
CO5: Develop interest in Human Rights, popular control, welfare state reasons for the growing importance and United Nations Declaration of Human Rights.

SEMESTER – III
TITLE: INDIAN CONSTITUTION **COURSE CODE: POL 301C**

COURSE OUTCOMES

CO1: Learn about Constituent Assembly and Salient Features of the Constitution of India

CO2: Get awareness about-Preamble,Fundamental Rights,Directive Principles of State Policy And Fundamental Duties

CO3: Able to analyse Union Executive , Indian Parliament: RajyaSabha, Vice- President ; LokSabha, Speaker and their Powers and Functions

CO4: Come to know about Constitutional provisions on Centre state relations i.e Legislative Relation, Administrative and Financial Relations

CO5: Acquire knowledge of Supreme Court of India: Composition, Powers and FunctionsandPublic Interest litigation, Judicial Review.

SEMESTER – IV

TITLE: INDIAN POLITICAL PROCESS COURSE CODE : POL 401C

COURSE OUTCOMES

CO1: Learn about Constituent Assembly and Salient Features of the Constitution of India

CO2: Know about Election Commission - Structure , Powers and Functions

b) Electoral Reforms

CO3: Able toanalysePolitical Parties in IndiaNational Parties-Indian National Congress,BJP and Communist Parties - CPI and CPI (M) - Policies &Programmes - causes for the 1964 Regional Parties-Akali Dal, DMK and AIADMK, Telugu Desam Party, T.R.S

CO4: Understand Voting Behaviour and its determinants.-Caste, Gender and Religion in politics

CO5: Orient towards Trends in political System-Coalition Politics, National Integration and Social movements.

SEMESTER – V

PAPER TITLE: INDIAN POLITICAL THOUGHT COURSE CODE: POL – 501C

COURSE OUTCOMES

CO1: Understand Manu: Social laws andKautilya's kingship, Mandala Theory, Saptanga Theory

CO2: learn about Gandhi's Non-violence, Satyagraha,Theory of Trusteeship. And also JoythiRaoPule'sSocial reform movement

CO3: Be Exposed to modern thought of Nehru's Democratic Socialism, Non-Alignment and and also Ambedkar Views on Indian Society.

CO4: Know about M.N. Roy's-Radical Humanism and Jaya Prakash Narayan'-Total Revolution.

SEMESTER – V

PAPER TITLE : PAPER-VI (CORE): WESTERN POLITICAL THOUGHT

COURSE CODE: POL – 502C

CO1: Understand the Plato's Theory of Justice, EducationSystem,Philosopher –King, Theory of Communism

CO2: Come to know about Aristotle,s Ideal state**,**Theory of Revolutions And Classification of governments

CO3: Discuss theories of state by Machiavelli, Thomas Hobbes, John Locke and Rousseau
CO4: Learn about theories likeHegel,s Civil Society, State and Karl Marx,s Surplus Value, Materialist Conception of History, State

SEMESTER-VI

PAPER TITLE: LOCAL SELF - GOVERNMENT IN ANDHRA PRADESH
COURSE CODE: POL 601GE

CO1: Evolution of Local Self-Government in India and Constitutional Provisions on local Self-Government

CO2: Understand the Importance of Constitutional Amendments -73rd and 74th Amendment on Local bodies

CO3: Know about Structure and functions of Panchayatiraj in Andhra Pradesh that is Gram Panchayat,MandalParishad And ZillaParishad.

CO4: Know about Structure and functions of urban local bodies in Andhra Pradesh that is Nagar Panchayats, Municipalities And Municipal Corporations

CO5: Understand theRole of leadership and Emerging Challenges

PAPER TITLE: PAPER –VIII C1 (CLUSTERS)
COURSE CODE: POL 602CE

CO1: To expose the Students to the scope and Basic Concepts of International Relations
CO2: Able to learn the Approaches to the study of International Relations – Idealism, Classical Realism, realism

CO3: Get acquaintance with the Phases of International Relations (1914-1945) - Causes for the First World War,Causes for the Second World War

CO4: Get acquaintance with the types and Phases of International Relations (1945 onwards)- Origins of First Cold War, Rise and Fall of Détente ,Origins and the End of Second Cold War

CO5: Awareness of International Organisation- The UNO in the protection of International Peace, Problems of the Third World

SEMESTER-VI
PAPER TITLE:PAPER –VIII C2 (CLUSTERS) COURSE CODE: POL 603CE

CO1: Understand the Evolution of Indian Foreign of Policy-Determinants of Indian Foreign of Policy
CO2: Describe the Non-Alignment and UNO -Role and Relevance

CO3: Be able to Understand India's Relation with USA and China: Pre- Cold War Era, Post- Cold War Era
CO4: Knows about India and her Neighbours in relation to South Asian Association of Regions Cooperation (SAARC)

DEPARTMENT OF ZOOLOGY

SEMESTER-I
TITLE OF THE PAPER: ANIMAL DIVERSITY BIOLOGY OF NON – CHORDATES
COURSE CODE: 101

To know the biodiversity of invertebrates

COURSE OBJECTIVES

1. To understand the structural organization of animals from Protozoa to Hemichordate
2. To understand the evolutionary relationship of different phyla from Protozoa to Hemichordate
3. To understand the specific phenomena exhibited by different groups of invertebrates from Protozoa to Hemichordate
4. To understand the taxonomic position and affinities of certain groups of invertebrates As Connecting links
5. To study the life cycles, and pathogenicity of certain

COURSE OUTCOMES

By the end of the course students will be able to
CO1: Gain knowledge in the fundamental concepts underlying the structural complexity in the organization of invertebrates.
CO2: Understand biology and pathogenicity of parasites and their adaptations analyse remedial and preventive measures and promote the same in public domain.

CO3: Appreciate and evaluate the economic, commercial, medicinal and culture importance of invertebrates and their larval stages in relation to phylogeny
CO4: Describe the significance of connecting links in understanding the concept of evolution

CO5: Explain the significance of specific phenomena in different group's of invertebrates in relation to their adaptability for survival

CO6: Comprehend the systems biology of individual phyla with a specific type study and understand the origin and evolutionary relationship of differentphyla and appreciate the uniqueness of individual phyla

SEMESTER-III
TITLE OF THE PAPER: CELL BIOLOGY, GENETICS, MOLECULAR BIOLOGY & EVOLUTION
COURSE CODE -301

COURSE OBJECTIVES

1. To understand the origin of cell and distinguish between prokaryotic andeukaryotic cell

2. To understand the role of different cell organelles in maintenance of lifeactivities
3. To provide the history and basic concepts of heredity, variations and gene interaction
4. To enable the students distinguish between polygenic, sex-linked, and multiple allelic modes of inheritance.
5. To acquaint student with basic concepts of molecular biology as to howcharacters are expressed with a coordinated functioning of replication, transcription and translation in all living beings
6. To provide knowledge on origin of life, theories and forces of evolution
7. To understand the role of variations and mutations in evolution of organisms

COURSE OUTCOMES:

The overall course outcome is that the student shall develop deeper understanding of what life is and how it functions at cellular level. This course will provide students with a deep knowledge in Cell Biology, Animal Biotechnology and Evolution and by the completion of the course the graduate shall able to –

CO1: To understand the basic unit of the living organisms and to differentiate the organisms by their cell structure.

CO2: Describe fine structure and function of plasma membrane and different cell organelles of eukaryotic cell.

CO3: To understandthe history of origin of branch of genetics, gain knowledge on heredity, interaction of genes, various types of inheritance patterns existing in animals

CO4: Acquiring in-depth knowledge on various of aspects of genetics involved in sex determination, human karyotyping and mutations of chromosomes resulting in various disorders

CO5: Understand the central dogma of molecular biology and flow of genetic information from DNA to proteins.

CO6: Understand the principles and forces of evolution of life on earth, the process of evolution of new species and apply the same to develop new and advanced varieties of animals for the benefit of the society

SEMESTER-V

TITLE OF THE PAPER: ANIMAL BIOTECHNOLOGY COURSE CODE : 501

COURSE OBJECTIVES

1. To understand the natural function of Restriction enzymes and explained how they are used in r-DNA technology.
2. To understand the features & Types of cloning vectors.
3. Purposes and applications of r-DNA techniques.
4. To understand uses of DNA probes.
   To understand gene transfer technologies for animals and animal cell lines.
5. Explain how the creation of sticky ends by restriction enzymes in use full in producing a r-DNA technologies.
6. To understand the process of nucleic acid hybridization.

OBJECTIVE OF THE COURSE: To educate students on various biotechnological techniques involve in animal biotechnology, gene manipulations, their role in production of medicines and transgenic animals.

COURSE OUTCOMES:

CO1: Students are made to become aware of the use of technology that is involved in cloning.

CO2: Improved quality of species with gene manipulations

CO3: Recent development in biotechnology that helps for better environment and Production of various monoclonal antibodies and vaccines.
CO4: Formation of different species - transgenic animals
CO5: Resistant variety and better yield

SEMESTER-V
TITLE OF THE PAPER: ANIMAL HUSBANDRY COURSE CODE: 502
COURSE OBJECTIVES:

1. To understand production of milk, meet, egg and other animal bi – products.
2. To understand delivery of necessary livestock health care through timely immunization against total diseases, proper diagnosis and rational treatment for optimization of livestock production.
3. To understand fulfil the objective of protein enriched quality food requirement of the growing population of the country and prevent malnutrion in one the highest malnourished children population in the world.
4. To understand principles of feeding and nutrient requirements for different stages of layers and broilers.
5. To make available quality concentrated animals feed to the cattle, buffalo, sheep and poultry to provide balanced ration at affordable prices.

COURSE OUTCOMES:
CO1: Students are given awareness about different varieties of chicks.
CO2: Students are familiarized with recent technologies those are applied to produce different species with variations which are more beneficial and income fetching.

CO3: Students with the help of self help schemes, can set up their own firms, and provide
CO4: Employability to others and to tap the resources of Government and Non governmental sectors.
CO5: They are given managerial and marketing skills as well.

SEMESTER-III
TITLE OF THE PAPER: POULTRY FARMING COURSE CODE: 301
COURSE OUTCOMES:
By successful completion of the course, students will be able to;
1. Understand the field level structure and functioning of insurance sector and its role in protecting the risks
2. Comprehend pertaining skills and their application for promoting insurance coverage
3. Prepare better for the Insurance Agent examination conducted by IRDA
4. Plan ‘promoting insurance coverage practice’ as one of the career options.

SEMESTER-I
TITLE OF THE PAPER: BASIC PRINCIPLES OF AQUACULTURE
COURSE CODE: 101
COURSE OBJECTIVES:

1. To study the concept of blue revolution and its impact at global, national and state level.
2. To get acquainted with different culture systems and culture methods.
3. To study the different types of ponds used in culture practices.
4. To study the criteria for construction of ideal fish pond.
5. To study the management practices in fish/ prawn culture.

COURSE OUTCOMES:

CO1: Understand the concept of blue revolution, analyse the history and compare the present status of aquaculture at global, national and state levels and its significance over agriculture and gain knowledge in the various aquaculture resources and advantages of culture over capture.

CO2: Acquire knowledge in the different types of aquaculture, culture systems and culture methods in practice worldwide.

CO3: Gain knowledge in the different types of culture ponds.

CO4: Understand the arrangement of different types of ponds in a fish farm and design an ideal fish farm.

CO5: Comprehend the best management practices to be adopted in aquaculture for good yield and acquire the skill in the analysis of water and soil parameters of a culture pond.

CO6: Identify the different types of weeds and predators in a culture pond and suggest the suitable control measures for their eradication.

SEMESTER-III
TITLE OF THE PAPER: FRESH WATER & BRACKISH WATER AQUACULTURE
COURSE CODE: 301
CORSE OBJECTIVES:

1. To know the present status of freshwater and brackish water aquaculture and their role in world economy and food production.
2. To gain knowledge on carp, prawn, shrimp and crab culture and composite fish culture systems.
3. To improve the technical knowledge on fish and shrimp hatchery technology and culture practices.
4. To improve the knowledge and technical skills for the identification of cultivable fin fish and shell fish.

OBJECTIVE OF THE COURSE: The students understand Fresh water & Brackish water Aquaculture.

COURSE OUTCOMES:

CO1: Learn the Status, Scope and Prospects of fresh water aquaculture in the world, India and AP.
CO2: Learn about Major Cultivable Indian Carps and Exotic fish Species introduced in India
CO3: Know about recent developments in the culture of clarius, anabas and murrels and special systems of aquaculture.
CO4: Gain knowledge of commercially valuable Fresh water prawns of India and their culturing methods.
CO5: Learn about culturing of brackish water Prawn Species P.mondon and L.vannamei and hatchery technology's involved

SEMESTER-V
TITLE OF THE PAPER: FISH HEALTH MANAGEMENT
COURSE CODE:501
COURSE OBJECTIVES:

1. To understand the principles of disease diagnosis and fish health management.
2. To know the prophylactic and therapeutic methods to control the diseases.

3. To understand the defence mechanism and immune system in fish and shrimp.
4. To gain detailed knowledge on the disease symptoms, causative agent, preventive measures and treatment for microbial, parasitic, nutritional and environmental disorders in fish and shrimp.
5. To understand the diagnosis tools that is followed in field of aquaculture and vaccine production for fish immunization.

OBJECTIVE OF THE COURSE: The students understand Fresh health management and Diseases of fishes.

COURSE OUTCOMES:

CO1: Provide students with knowledge about fish diseases and pathological aspects of diseases.

CO2: Learn about Fungal, Viral and Bacterial diseases of finfish.

CO3: Learn about major shrimp viral, bacterial and protozoan diseases and prevention and therapy methods.

CO4: Gain knowledge of Nutritional deficiency related diseases and antibiotic and chemotherapeutics

.

CO5: Understand and learn the importance of diagnostic tools in identification of diseases andapplication and development of vaccines. To know about production of disease free seeds and good feed management.

SEMESTER-V

TITLE OF THE PAPER: EXTENSION, ECONOMICS & MARKETING

COURSE CODE: -502

COURSE OBJECTIVES:

1. To explain fisheries economics and marketing.
2. To understand economics constraints in fisheries development, free access to fisheries, sustainable yield curve and total revenue curve, bio economic equilibrium, factor rents welfare economic theory and its relevance for fisheries externalities.
3. To understand fisheries extension methods and rural development
4. Write Feasibility report.

Objective of the course: The students understand Extension, Economics & Marketing aspect of fisheries and aquaculture and help the students in applying their theoretical knowledge into practical in order to be self reliance and to be a good pace setters in the business world.

Course outcomes:

CO1: Gain the Knowledge of basic concepts of economics with reference to fisheries and various factors influencing the fishery products price.

CO2: Will come to know about fisheries marketing, methods of economic analysis of business organizations and preparation of project and project appraisal.

CO3: To know about application of economic principles to aquaculture operations.

CO4: Get the broad knowledge of scope and objectives, principles of fisheries extension.

CO5: Understand the importance of transfer technology of ICAR programmes and training at DAATT Centres and their role in education of aqua farmers through print and electronic media.

SEMESTER-II

TITLE OF THE PAPER: ANIMAL DIVERSITY BIOLOGY CHORDATES

COURSE CODE: -201

COURSE OBJECTIVES:

1. To understand the structural organization of animals of prochordates and cyclostomes.

2. To understand the type study belonging to Pisces.
3. To understand type study belonging to amphibian.
4. To understand the type study belonging to reptilia and identification of piousness snakes.
5. To understand the type study belonging to Aves and Aquatic mammals.

COURSE OUTCOMES:

CO1: Gain knowledge in the major Chordate groups, describe their salient features, appreciate the diversity and analyze the uniqueness of different groups.

CO 2: Understand the fundamental organization of chordates and evaluate the similarities and differences among the different groups of chordates in the light o evolutionary significance.

CO 3: Comprehend and compare the morphology and anatomy of different classes of chordates and apply the same to their fitness in the ecological habitats

CO 4: Develop the skill of identifying the vertebrate fauna in general and South Indian fauna in specific.

CO 5: Acquaint with the significance of unique mechanisms and behavioral patterns exhibited by different groups of chordates.

SEMESTER-IV
TITLE OF THE PAPER: ANIMAL PHYSIOLOGY, CELLULAR METABOLISM ANDEMBRYOLOGY
COURSE CODE: -401

COURSE OBJECTIVES:

1. To achieve a thorough understanding of various aspects of physiologicalsystems and their functioning in animals.
2. To instil the concept of hormonal regulation of physiology, metabolism andreproduction in animals.
3. To understand the disorders associated with the deficiency of hormones
4. To demonstrate a thorough knowledge of the intersection between the disciplines of Biology and Chemistry.
5. To provide insightful knowledge on the structure and classification of carbohydrates, proteins, lipids and enzymes
6. To demonstrate an understanding of fundamental biochemical principles such as the function of biomolecules, metabolic pathways and the regulation of biochemical processes
7. To make students gain proficiency in laboratory techniques in biochemistry and orient them to apply the scientific method to the processes of experimentation and hypothesis testing.

COURSE OUTCOMES:

This course will provide students with a deep knowledge in Physiology, Cellular metabolism and Molecular Biology and by the completion of the course the graduate shall able to –

CO1: Understand the functions of important animal physiological systems including digestion, cardio respiratory and renal systems.

CO2: Understand the muscular system and the neuro-endocrine regulation of animal growth, Development and metabolism with a special knowledge of hormonal control ofhuman Reproduction.

CO3: Describe the structure, classification and chemistry of biomolecules and enzymes

Responsible for sustenance of life in living organisms

CO4: Develop broad understanding the basic metabolic activities pertaining to the catabolism and anabolism of various biomolecules

CO5: Describe the key events in early embryonic development starting from the formation of gametes up to gastrulating and formation of primary germ layers.

SEMESTER-IV

TITLE OF THE PAPER: **IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY**
COURSE CODE: -402

COURSE OBJECTIVES:

1. To trace the history and development of immunology
2. To provide students with a foundation in immunological processes
3. To be able to compare and contrast the innate versus adaptive immune systemsand humoral versus cell-mediated immune responses Understand the significance of the Major Histocompatibility Complex in terms ofimmune response and transplantation
4. To provide knowledge on animal cell and tissue culture and their preservation
5. To empower students with latest biotechnology techniques like stem cell technology, genetic engineering, hyridoma technology, transgenic technology and their application in medicine and industry for the benefit of living organisms
6. To explain *in vitro* fertilization, embryo transfer technology and other reproduction manipulation methodologies.
7. To get insight in applications or recombinant DNA technology in agriculture, production of therapeutic proteins.
8. To understand principles of animal culture, media preparatio

COURSE OUTCOMES:

This course will provide students with a deep knowledge in immunology, genetics, embryology and ecology and by the completion of the course the graduate shall able to –

CO1: To get knowledge of the organs of Immune system, types of immunity, cells andorgans of immunity.

CO2: To describe immunological response as to how it is triggered (antigens) and regulated (antibodies)

CO3: Understand the applications of Biotechnology in the fields of industry and agricultureincluding animal cell/tissue culture, stem cell technology and genetic engineering.

CO4: Get familiar with the tools and techniques of animal biotechnology

SEMESTER-VI
TITLE OF THE PAPER: IMMUNOLOGY COURSE CODE: -601(GE)

COURSE OBJECTIVE: To facilitate students to understand the role of immune system in the body, cells and organs of immune system, their structures and functioning

COURSE OUT COMES:

CO1: Students grow in understanding of immune system, to improve their immunity and to protect them from pathogens.

CO2: They identify their blood groups, their compatibility and the need to donate blood to save life.

CO3: Students identify the classes, structures and functions of antibodies, antigen –antibody reactions.

CO4: This study enables students to take care of themselves and take timely precautions against

various diseases.
CO5: They identify the cure of different diseases through various vaccines, the instruments involved in identification of immune reactions etc.

SEMESTER-I
TITLE OF THE PAPER: **BIOLOGY OF FIN FISH & SHELL FISH**
COURSE CODE: -101
COURSE OBJECTIVES

1. To study the systematics of cultivable finfish and shellfish.
2. To understand feeding habit and growth patterns of cultured species.
3. To study the factors responsible for longevity of fishes.
4. To study the reproductive biology of finfish and shell fish.
5. To study the developmental aspects of cultivable finfish and shell fish.
6. To study the role of hormones in the growth of finfish and shell fish. .

COURSE OUTCOMES

By the end of the course students will be able to

CO1: Classify the finfish and shellfish, analyse the cultivable species of fin fish and shellfish of commercial importance, describe their salient features and appreciate the diversity and uniqueness of different groups.
CO2: Comprehend the relationship between food and growth, age and growth, hormones and growth in cultivable fin and shell fish.
CO3: Gain knowledge and compare the feeding habits, mouth parts and digestive systems and analyze gut contents.
CO4: Develop the skill of identifying the gut contents, gonadal maturity and fecundity and comprehend the concept of breeding behaviour, embryonic and larval development of cultivable aquatic fin and shell fish.
CO5: Acquaint with the significance of unique mechanisms and behavioural patterns like sense organs, electric organs, buoyancy, moulting and metamorphosis exhibited by finfish and shell fish.

SEMESTERE-IV

TITLE OF THE PAPER: FISH NUTRITION & FEED TECHNOLOGY
COURSE CODE: **-401**

COURSE OBJECTIVES:

1 To know the nutritional requirements of fish and shell fish at different stages of their life.
2 To understand the different types of feeds, and feed additives used in the preparation of fish and shell fish feeds.
3 To improve the knowledge on feed manufacture and feed storage.
4 To gain knowledge on feeding and feed evaluation methods.
5 To gain knowledge on feed manufacture and storage
6 To know the nutritional pathology and remedial methods of cultivable fish and shrimp.
7 To improve the technical knowledge feed quality and nutritional value analysis.

COURSE OUTCOMES:
CO1: Understand Nutritional requirements of cultivable fishes and factors affecting energy partitioning and feeding

CO2: Know different types of feed and FCR and different types of feeders
CO3: Gain Knowledge of Feed manufacture and storage methods of feeds
CO4: Understand the value of Feed additives and Non-Nutrient ingredients
CO5: To create awareness of different nutritional deficiency and importance of natural and supplementary feeds and balanced diet.

SEMESTER-IV

TITLE OF THE PAPER: FISH HEALTH MANAGEMENT COURSE CODE: -402

COURSE OBJECTIVES:

1. To understand the Principles of disease diagnosis and fish health management.
2. To know the prophylactic and therapeutic methods to control the diseases.
3. T understand the defense mechanism and immune system in fish and shrimp.
4. To gain detailed knowledge on the disease symptoms, causative agent, preventive measures and treatment for microbial, parasitic, nutritional and environmental disorders in fish and shrimp.
5. To understand the diagnosis tools that are followed in field of aquaculture and vaccine production for fish immunization.
6. To know the significance of Quarantine, Biosecurity and SPF seed in the health management of fish and shrimp.

COURSE OUTCOMES:

CO1: Provide students with knowledge about fish diseases and pathological aspects of diseases.
CO2: Learn about Fungal, Viral and Bacterial diseases of finfish.
CO3: Learn about major shrimp viral, bacterial and protozoan diseases and prevention and therapy methods.
CO4: Gain knowledge of Nutritional deficiency related diseases and antibiotic and chemotherapeutics.
CO5: Understand and learn the importance of diagnostic tools in identification of diseases and application and development of vaccines. To know about productio of disease free seeds and good feed management

SEMESTER-VI

TITLE OF THE PAPER: ORNAMENTAL FISHERY
COURSE CODE: -601(GE)

COURSE OBJECTIVES:

1. This course has been designed to understand identification and classification of commercially important fishes and other aquatic vertebrates by the students
2. The course objectives are to provide the students with an introductory knowledge of live bearers.
3. The students will be required to identify common Marine Ornamental species available in and around their region using Ocean area.

4. To gain detailed knowledge on the disease symptoms, causative agent, preventive measures and treatment in fish and shrimp.
5. To understand the students will be required - Commercial production of aquarium fish and plants

COURSE OUTCOMES:
At the end of the course, students will be able to:

CO1: Describe and identify the characters of commercially important ornamental fishes

CO2: Explain the procedure for transportation fish and feed preparation

CO3: Identify the diagnosing procedure for ornamental fish diseases

CO 4: Construct aquarium and analyse water quality parameters

CO5: Access the role of Mass production of aquarium plants

SEMESTER-VI
TITLE OF THE PAPER: FISH PROCESSING TECHNOLOGY
COURSE CODE: -602(CL-I)
COURSE OBJECTIVE:
1. The students understand Fish Processing Technology
2. Advanced treatment of the concepts¬ involved in the production,
3. processing and acceptance of Fish processing Products derived from fish- Fish waste utilization

COURSE OUTCOMES:
CO1: After completing this course students can able to, deliver the different unit Operations and its equipments involved in fish processing fishing resources.
CO2: Develop value added products from fish. Able to know about quality control of Fish processing
CO3: Know about different methods of processing of fish Able to acquire a confident to get placement in any fish processing industry.
CO4: Students grow in understanding of Packing, Cold Storage and Export of Fishery Products.
CO5: Export of fishery products from India - major countries

SEMESTER-VI
TITLE OF THE PAPER: FISHERY MICROBIOLOGY AND FISHERY BY-PRODUCTS
COURSE CODE:-603(CL-II)

COURSE OBJECTIVE: The students understand Fishery Microbiology and Fishery by-products.
COURSE OUTCOMES
CO1: The ecosystem and taxonomy of microbes will be understood by the students along with prokaryotic and eukaryotic divisions
CO2: Hands on techniques on handling the microscopes in the class and instrumentation lab will be elaborate study of microbial organisms advanced techniques for easy and speedy identification wil l be known
CO3: Screening, isolation and enumeration of microbes using different media and application of advanced techniques for easy and speedy identification will be known

CO4: Students will be able to discuss Fishery By - products.
CO5: The practical knowledge of Value Added Products will be achieved by the students .

SEMESTER-VI
TITLE OF THE PAPER: QUALITY CONTROL IN PROCESSING PLANTS
COURSE CODE: -604(CL-III)
COURSE OBJECTIVE: The students understand Quality control in processing plants.

COURSE OUTCOMES:

CO1: Explain the application of fish quality and quality standards.
CO2: To understand the different types of water treatments
CO3: Examine the chemical and microbiological quality of fish and fish products.
CO4: To gain the knowledge on different types of processing plants.
CO5: Review of legislative approaches for the management of food safety.