ANDHRA LOYOLA COLLEGE

AUTONOMOUS :: VIJAYAWADA - 520 008

Established : 1954

A CHRISTIAN MINORITY COLLEGE WITH CONSTITUTIONALLY PROVIDED RIGHT OF ADMISSION
(AN ISO 14001 : 2015 INSTITUTION)
THE ONLY COLLEGE IN BOTH THE TELUGU STATES TO HAVE BEEN RANKED AMONG
THE TOP 150 COLLEGES BY NIRF SINCE THE INCEPTION OF THE RANKING IN 2017
SELECTED UNDER THE STAR COLLEGE SCHEME OF DBT AND FIST PROGRAMME OF DST, GOVT.OF INDIA
SELECTED FOR ENHANCEMENT OF QUALITY AND EXCELLENCE UNDER RUSA BY MHRD, GOVT.OF INDIA

PROGRAM OUTCOMES

A College Dedicated to All-Round Development of its Students

Andhra Loyola College
(Autonomous)
VIJAYAWADA-520 008.
Accredited in III Cycle at A+ Grade with a CGPA of 3.66 / 4.00
Web: www. andhraloyolacollege.ac.in e-mail: contactalc@gmail.com

STD : 0866
Main Off. : 2476082
Inter : 2476965
Degree : 2481907
P.G. : 2474902
CoE : 2473251
Fax (Principal) : 2474531
Fax (Correspondent) : 2486084

DEPARTMENT OF ECONOMICS

1. **Critical Thinking & Problem Solving**: Develop the ability to analyze, evaluate, and provide solutions to complex economic problems using critical thinking and quantitative techniques.
2. **Quantitative Analysis**: Use advanced statistical, mathematical, and econometric methods to analyze economic data and interpret results.
3. **Economic Theory Application**: Apply microeconomic and macroeconomic principles to assess real-world economic phenomena and policy issues.
4. **Research & Inquiry**: Demonstrate the ability to conduct economic research, including formulating hypotheses, gathering data, and synthesizing findings.
5. **Policy Evaluation**: Evaluate public and private sector economic policies, their impact on economic development, and social welfare.
6. **Global Perspective**: Analyze global economic interdependence, understanding international trade, finance, and the role of multinational organizations.
7. **Technological Proficiency**: Use technology, including economic software and databases, to collect and analyze economic data.
8. **Ethical and Social Responsibility**: Understand and apply ethical standards in economic decision-making, including social responsibility and sustainability.
9. **Communication Skills**: Effectively communicate economic findings, ideas, and policy recommendations in both oral and written formats.
10. **Interdisciplinary Knowledge**: Integrate economic knowledge with other disciplines such as political science, history, and sociology to understand multifaceted economic issues.
11. **Development & Welfare**: Evaluate economic development strategies and their role in improving the quality of life and reducing poverty.
12. **Adaptability & Lifelong Learning**: Cultivate the skills necessary for continuous learning and adaptation to changes in economic theories, policies, and global trends.

DEPARTMENT OF HISTORY

1. The Programme will transferor The students as Rational, Scientific, Objective thinking Humanistic person
2. will gain knowledge about the Ways of life of man in the prehistoric times in India
3. will get enlightened about the advancements made by Indians in the fields of Art , Architecture, Science; Technology, & literature, Philosophy.
4. will learn about the nature of rule of various kings of Various Dynasties that ruled India in different parts of India during different times.
5. will get to know an understanding about the Socio Economic. & Religious transitions that occurred in India through Ages
6. Students will get a picture of the foreign influences on different fields of I. Such as Indian ways of life , Such as Greeco Roman. Islamic and Western European.
7. Conditions of Peasants and various producing communities, Artisans, craft men, traditional industries that existed in India over the Centuries in India will be learnt by the students.
8. will understand the way Indian Economy, Society, culture was subjected to the colonial influence.
9. will learn about the History related Tourism and Hospitality industry and get a picture of Employment opportunities available in Tourism Industry
10. Will be exposed to the art of Script writing for films and Journalism related fields.
11. will bet to know about the techniques of History related field of Archaeology and also learn about the Employment opportunities in the field of Archaeology and Museums
12. will gain gets the information about the World History and Indian History through Ages that greatly helps Students in securing good score when they appear for public service Exams and progression for higher Studies.

DEPARTMENT OF POLITICAL SCIENCE

1. Develop knowledge of theories, concepts, and research methods in humanities and social sciences.
2. Assess how global, national, and regional developments affect society from political science perspective.
3. The Political Science degree furnishes the students with a unique multidisciplinary approach in social sciences and prepares them for further academic study and for careers in the public and the private sector.
4. Through the study of important philosophical, theoretical, and ideological foundations in the study of political science, students are expected to develop critical thinking and arguments.
5. Students will have an understanding on the international political system as it is and as it ought to be.
6. Learning the fundamentals of Indian government and politics is important for Indian students and has a job-prospect particularly in civil services and other competitive examinations.
7. By studying organizational and administrative behaviour in public administration, students are expected to acquire leadership and management skills.
8. The study of human rights will empower students to stand for the protection and promotion of basic human rights and thus contribute to national and international peace.

DEPARTMENT OF ENGLISH

POS	DESCRIPTION
PO 01	**Analyze literary texts critically:** Demonstrate understanding of literary theories, genres, and historical contexts (e.g., Introduction to English Literature, Jacobean Literature).
PO 02	**Communicate effectively:** Express ideas clearly in writing and speech (e.g., Communication and Soft Skills, Reading and Writing Skills).
PO 03	**Demonstrate literary-historical knowledge**: Understand the development of English literature from 600-2000 and appreciate diverse cultural, social, and historical contexts.
PO 04	**Evaluate literary and critical theories**: Apply theoretical frameworks to literary analysis (e.g., Introduction to Elizabethan Literature, Romantic Literature).
PO 05	**Develop writing skills:** Produce engaging writing for various purposes and audiences (e.g., Reading and Writing Skills).
PO 06	**Engage in informed discussion:** Participate in respectful discussions on literary and critical topics (e.g., Communication and Soft Skills).
PO 07	**Recognize literary and cultural connections**: Identify relationships between literature, culture, and society (e.g., Glimpses of World Literature).
PO 08	**Apply critical thinking**: Evaluate information, identify biases, and develop well-supported arguments.
PO 09	**Demonstrate information literacy**: Locate, evaluate, and utilize relevant sources effectively.
PO 10	**Showcase professional skills**: Prepare for careers in teaching, writing, editing, publishing, or related fields.
PO 11	**Think creatively:** Generate innovative ideas and solutions through imaginative thinking.
PO 12	**Conduct research and interpretation:** Conduct thorough research, analyse information, and interpret complex data.

DEPARTMENT OF BUSINESS MANAGEMENT

PO 1: Foster critical thinking, problem-solving, and leadership skills necessary to adapt to the dynamic and evolving landscape of the business world, including globalization and technological advancements.

PO 2: Acquire competencies in adapting to rapidly changing business environments, demonstrating the ability to acquire new skills and knowledge as needed.

PO 3: Develop proficiency in managerial and operational skills across various disciplines of business, enabling students to effectively navigate diverse organizational environments.

PO 4: Master the preparation and delivery of business documents, along with cultivating essential soft skills such as communication, teamwork, and leadership.

PO 5: Cultivate ethical reasoning and decision-making skills, enabling students to identify and address ethical conflicts in business contexts while considering the needs and interests of stakeholders.

PO 6: Analyse and interpret information effectively to address complex business problems, demonstrating the ability to make reasoned decisions based on data and evidence.

PO 7: Communicate professionally and effectively in various business contexts, including written, oral, and interpersonal communication.

PO 8: Apply professional standards, theories, and research methodologies to solve business problems and optimize organizational performance.

PO 9: Demonstrate leadership skills relevant to different business domains, including supervision, decision-making, strategic planning, and team management.

PO 10: Understand and apply global business principles, including international trade, cross-cultural management, and global supply chain management.

PO 11: Develop practical skills through experiential learning opportunities, internships, and practical projects, preparing students for real-world business challenges.

PO 12: Prepare students for diverse career opportunities in business administration, entrepreneurship, consulting, finance, marketing, human resources, and other related fields.

DEPARTMENT OF MATHEMATICS

PO1: Foundational Knowledge: Demonstrate a thorough understanding of fundamental mathematical concepts, including Algebra, Calculus, Discrete Mathematics and Differential Equations. **(L1)**

PO2: Problem-Solving: Develop strong Problem-solving skills, including the ability to analyse, formulate and solve mathematical problems using appropriate methods and techniques. **(L4)**

PO3: Mathematical Proof: Construct and communicate mathematical proofs, demonstrating logical reasoning and understanding of mathematical structures. **(L1)**

PO4: Applied Mathematics: Apply mathematical principles to solve real-world problems in fields such as Physics, Engineering, Economics, Computer Science and other relevant disciplines. **(L3)**

PO5: Multidisciplinary Applications: Recognize and apply mathematical principles across different disciplines, demonstrating the versatility and applicability of Mathematics. **(L2)**

PO6: Advanced Mathematics: Gain exposure to advanced topics in mathematics, such as Abstract Algebra, Real Analysis, Complex Analysis and Numerical Analysis depending on the program's focus. **(L2)**

PO7: Mathematical Modelling: Develop the ability to create mathematical models to represent and analyse real-world phenomena, emphasizing the practical applications of Mathematics. **(L6)**

PO8: Communication Skills: Effectively translate mathematical ideas both orally and in writing, adapting communication style to various fields. **(L2)**

PO9: Research Skills: Acquire basic research skills, including the ability to review literature, formulate research questions, and conduct independent or collaborative mathematical research projects. **(L6)**

PO10: Critical Thinking: Cultivate critical thinking skills to evaluate mathematical arguments, theories and solutions. **(L5)**

PO11: Professional Development: Develop an awareness of career opportunities and pathways for further study, with an emphasis on lifelong learning and professional growth. **(L6)**

PO12: Teamwork: Collaborate effectively in group projects, fostering teamwork and interpersonal skills. **(L6)**

DEPARTMENT OF STAISTICS

1. **Understanding Core Statistical Concepts**
   Acquire a strong foundational understanding of statistical theories, including probability, inferential statistics, and applied statistical methods.
2. **Proficiency in Data Analysis**
   Develop skills to process, Analyze, and interpret data effectively using statistical techniques to solve real-world problems.
3. **Application of Statistical Tools**
   Gain expertise in using statistical software and programming languages, such as R, Python, and SPSS, to analyse and visualize data.
4. **Interdisciplinary Knowledge**
   Apply statistical methods across various fields, including economics, biology, social sciences, and engineering, fostering a multidisciplinary approach.
5. **Critical Thinking and Decision-Making**
   Enhance critical thinking abilities to interpret statistical results, make data-driven decisions, and solve complex problems logically.
6. **Research and Experimental Skills**
   Design experiments, conduct surveys, and Analyze datasets to answer research questions and contribute to advancements in statistical knowledge.
7. **Adaptation to Technological Advancements**
   Stay updated with modern developments in data science, big data analytics, and machine learning, adapting to technological innovations.
8. **Ethical Practices in Data Handling**
   Ensure ethical data handling, emphasizing accuracy, transparency, and responsibility in the collection, analysis, and reporting of data.
9. **Effective Communication**
   Present statistical findings and insights clearly and concisely, both orally and in writing, for diverse audiences.
10. **Lifelong Learning**
    Foster a culture of continuous learning to keep pace with evolving statistical techniques and methodologies.
11. **Preparation for Diverse Careers**
    Equip students with the skills and knowledge necessary to pursue careers in academia, research, industry, government, and consulting.
12. **Entrepreneurship and Innovation**
    Encourage entrepreneurial thinking and innovation, enabling students to identify opportunities and implement statistical solutions in business and industry.

DEPARTMENT OF COMPUTER SCIENCE

PO1: Computer Science Knowledge: Acquire fundamental knowledge and understanding of theoretical concepts in Computer Science.

PO2: Problem Solving Skills: Develop critical thinking and problem-solving skills necessary for Software Development

PO3: Conduct Investigation of complex problems Understand the practical applications of scientific principles and theories in various real-world contexts, including industries, research, and daily life.

PO4: Apply Solutions: Develop practical skills specific to computer programming, data analysis, and data interpretation.

PO5: Problem Analysis: Encourage interdisciplinary thinking and collaboration, recognizing the interconnectedness of different scientific disciplines and their applications in solving complex problems.

PO6: Computer Science and Society: Prepare students to Recognize and uphold professional, ethical, legal, and social responsibilities in computing, while contributing to society through responsible computing practices.

PO7: Modern Tools Usage: Understand and use the modern tools and resources

PO8: Ethics: Promote ethical and responsible conduct in scientific inquiry and application, emphasizing integrity, accuracy, and transparency in research and professional practice.

PO9: Individual and team work: Prepare students for diverse career opportunities by equipping them with a broad range of analytical, technical, and communication skills necessary for success in the scientific workforce.

PO10: Communication: Prepare students to develop effective communication skills and the ability to work in multidisciplinary teams, understanding the impact of computing in various domains.

PO11: Project management and Finance: Cultivate an entrepreneurial mind set and aptitude, enabling students to explore innovative career paths and pursue entrepreneurial endeavours in relevant fields.

PO12: Life Long Learning: Foster a positive attitude towards continuous learning, research, and professional development, preparing students for further studies or employment in academia, industry, or government sectors

DEPARTMENT OF ELECTRONICS

PO1- **Critical thinking skills:** Students are able to take informed actions by differentiating between fact and opinion, recognize and evaluate, develop inferential skills, and distinguish logical assumptions from different perspectives and allow making decisions and judgments by using scientific-based reasoning.

PO2- **Analytical skills:** Students can analyze and interpret concepts from various methods and apply these methods to analogous situations. They assess the elements of a problem and become competent at problem-solving.

PO3- **Usage of modern tools and technologies**: Students develop a scientific orientation and easily adopt modern techniques.

PO4- **Effective communication:** Students develop skills like listening, speaking, reading and writing in their respective domains and become communicators.

PO5- **Ethics:** Students develop ethical values and contribute to nation building as responsible citizens.

PO6- **Self-directed and life–long learning:** Acquire the ability to engage in independent and lifelong learning in the broadest context of socio-technological changes.

PO7- **Social interaction and sustainability:** Students develop empathy towards the societal needs and can contribute to sustainable development and gain knowledge and skill to understand and solve environmental issues and problems

PO8- **Effective Project Management:** Students will Identify the goals, objectives and components of a project and decide the appropriate time of completion. Also Plan, organize and direct the endeavors of teams to achieve the set targets in time.

PO9 - **Domain Expertise:** Students acquire comprehensive knowledge and skills then they make use of this knowledge innovatively. Also effectively apply the knowledge and skills to address various issues.

PO10 - **Project Innovation:** Develop innovative skills of developing projects on different core subjects such as Electronics and Computer Science. This will enhance understanding through practicals and hands-on practice.

DEPARTMENT OF VISUAL COMMUNICATION AND ELETRNIC MEDIA

PO 1	**Fundamental Knowledge:** Achieve a thorough understanding of the essential knowledge in the field of Visual Communication and Electronic Media
PO 2	**Problem Solving and Critical Thinking:** Apply theoretical knowledge and critical thinking skills to address problems and interpret experimental results
PO 3	**Media lab Proficiency:** Demonstrate proficiency in using Studio equipment, techniques, and safety protocols for qualitative and quantitative analysis.
PO 4	**Research and Innovation:** Conduct independent and collaborative research to discover new media trends in the areas of Visual communication and Electronic Media supporting continuous education and development.
PO 5	**Data Analysis and Interpretation:** Assess the performance of visual media and communication strategies using data, applying analytics.
PO 6	**Teamwork and Leadership:** Work collaboratively within diverse teams, showcasing leadership and interpersonal skills to address media and societal challenges.
PO 7	**Communication Skills:** Effectively communicate Media concepts, research findings, and technical data through written reports, oral presentations, and digital tools.
PO 8	**Interdisciplinary Integration:** Integrate principles from various fields, including design, technology, social science, and business, into their media creation processes to address complex communication challenges.
PO 9	**Ethics and Professionalism:** Recognize the ethical ramifications in media production including copyright, intellectual property and responsible content development
PO 10	**Environment and Sustainability:** Adopt Visual and electronic media tools to communicate environmental issues effectively, using design, storytelling, and digital platforms to raise awareness about sustainability challenges and solutions.
PO 11	**Entrepreneurship and Industrial Skills:** Develop skills that are relevant to industrial applications, entrepreneurship, and innovation in Media industries.
PO 12	**Lifelong learning:** Adapt to advancements in technology and related fields for professional development.

DEPARTMENT OF COMPUTER SCIENCE (BCA)

PO1: Knowledge of Computer Science
Students will gain a solid understanding of fundamental computer science principles, which will be built upon throughout the program.

PO2: Capabilities for Solving Problems
Students will develop critical thinking and problem-solving skills through algorithm development, debugging, and creating solutions to real-world problems.

PO3: Investigate Complicated Problems
Students will apply scientific methods, analytical techniques, and structured approaches to solve complex problems.

PO4: Use the Solutions
Students will gain practical experience by applying theoretical knowledge to real-world issues using structured methods, tools, and frameworks.

PO5: Analysis of Problems
Students will develop interdisciplinary problem-analysis skills, integrating knowledge from various fields to tackle complex computer science problems.

PO6: Society and Computer Science
Students will understand the societal, ethical, and professional implications of computing, preparing them to act responsibly in their careers.

PO7: Use of Contemporary Tools
Students will become proficient in current tools, platforms, and technologies to meet industry standards.

PO8: Morality
Students will be knowledgeable in computing ethics, empowering them to make responsible decisions in their professional and research activities.

PO9: Individual and Collaborative Tasks
Students will enhance their ability to solve problems independently and collaboratively within teams.

PO10: Interaction
Students will develop effective communication skills to interact with diverse audiences, work in teams, and convey technical ideas clearly.

PO11: Finance and Project Management
Students will acquire skills in project management and finance, enabling them to oversee projects, manage resources, and understand the financial aspects of technology ventures.

PO12: Continuous Education
Students will cultivate a lifelong learning mindset, adapting to the ever-changing technological landscape and continuing professional development.

DEPARTMENT OF COMPUTER SCIENCE (DATA SCIENCE)

1. **Fundamental Knowledge**
   Develop a strong foundation in data science, statistics, and programming concepts using tools such as R, Python, and SQL.
2. **Statistical Thinking**
   Apply descriptive and inferential statistical techniques to analyze and interpret data effectively.
3. **Practical Implementation**
   Gain hands-on experience in data analysis and visualization through practical applications in R, Python, Tableau, and JavaScript.
4. **Data Handling Proficiency**
   Demonstrate skills in data wrangling, cleaning, and preprocessing using modern programming languages and frameworks.
5. **Advanced Analytical Skills**
   Master advanced techniques like predictive modeling, machine learning, and artificial intelligence to solve complex real-world problems.
6. **Big Data Competence**
   Acquire expertise in handling and analyzing large-scale data using tools like Hadoop, Spark, and other big data platforms.
7. **Visualization Expertise**
   Design and create impactful data visualizations to communicate insights effectively using Tableau, Python, and JavaScript.
8. **AI and Deep Learning Proficiency**
   Understand and implement artificial intelligence concepts and deep learning frameworks like TensorFlow and PyTorch.
9. **Research and Development**
   Explore and develop innovative solutions through research projects, internships, and computational data science techniques.
10. **Cybersecurity and Ethics**
    Learn data security and ethical practices to ensure safe handling and processing of sensitive data.
11. **Emerging Technologies Acumen**
    Stay updated and skilled in emerging fields such as natural language processing, computer vision, and social media analytics.
12. **Professional and Teamwork Skills**
    Cultivate teamwork, problem-solving, and project management skills through collaborative projects and apprenticeships.

DEPARTMENT OF PHYSICS

PO 1: KNOWLEDGE

- Acquire comprehensive knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry and Mathematics.
- This fundamental knowledge would reflect the latest understanding of the field.
- Apply subject knowledge and skill to diverse problems within and across disciplines.

PO 2: EFFECTIVE COMMUNICATION

- Express the subject through technical writing as well as through oral presentation.
- Transmit the thoughts in a proper way.
- Cultivate confidence to present significant information in a comprehensive, obvious, and accurate way

PO 3: CRITICAL REASONING AND PROBLEM SOLVING

- Solve problems/numerical using basic knowledge and concepts
- Develop scientific outlook to science subjects and towards the aspects related to life.
- Develop an inquisitive characteristic through predicting, planning exploring and interpreting experimental investigation.

PO 4: SELF-DIRECTED LEARNING AND ETHICS

- Acknowledge and appreciate the significance of science and its application in academic, industrial, economic, environmental and social contexts
- Follow the ethical principles and responsibilities to serve the society

PO 5: INDIVIDUAL & GROUP PRESENTATION

- Act as team player in laboratory, field-based situation and industry
- Cooperate, coordinate, and perform effectively in diverse teams/groups.
- Develop the skills of collaboration
- Work as a member of a scientific project team and communicate across teams

PO 6: TECHNOLOGICAL AND DIGITAL LITERACY

- Use e-learning resources such as MOOC and other digital tools for lifelong learning.

- Access essential material and special ICT tools for educational needs
- Collect and store data, access library search tools, simulation software and related work
- Choose appropriate online programmes for further learning; participate in seminars and conferences

PO 7: ENVIRONMENT AND SUSTAINABILITY

- Realize how interdisciplinary approach attributes for better solutions and new ideas for the sustainable developments
- Participate and address environmental issues, as well as take action to keep our natural world healthy

PO 8: SKILLED PROJECT MANAGER

- Set project goals

- Acquire knowledge about project management
- Pertain to scientific approach in writing, planning etc and overcome technical challenges

DEPARTMENT OF CHEMISTRY

POS	DESCRIPTION
PO 01	**Fundamental Knowledge:** Achieve thorough understanding of the essential principles of chemistry, including analytical, inorganic, organic, physical, and biological chemistry
PO 02	**Problem Solving and Critical Thinking:** Apply theoretical knowledge and critical thinking skills to address problems and interpret experimental results.
PO 03	**Laboratory Proficiency:** Students will develop the ability to design, conduct, record, and analyze the results of experiments effectively.
PO 04	**Research and Innovation:** Conduct independent and collaborative research to discover new areas in chemistry, utilizing cross-disciplinary methods.
PO 05	**Data Analysis and Interpretation:** Effectively analyse and interpret chemical data using relevant computational tools and statistical methods.
PO 06	**Teamwork and Leadership:** Work collaboratively within diverse teams, showcasing leadership and interpersonal skills to address scientific and societal challenges.
PO 07	**Communication Skills:** They will develop the skills to clearly and effectively communicate scientific ideas and findings through written reports and oral presentations.
PO 08	**Interdisciplinary Integration:** Integrate knowledge of chemistry with other fields like biology, physics, material science, and engineering to solve complex real-world problems.
PO 09	**Ethics and Professionalism:** Students will demonstrate an awareness of ethical behaviour and responsibility in the professional practices and societal issues faced by chemists.
PO 10	**Environment and Sustainability:** Understand the chemical processes affecting the environment and apply green chemistry principles to create sustainable solutions for environmental challenges.
PO 11	**Entrepreneurship and Industrial Skills:** Graduates will develop skills that are relevant to industrial applications, entrepreneurship, and innovation in chemistry-based industries.
PO 12	**Lifelong Learning:** They will adapt to advancements in chemistry and related fields for professional development.

DEPARTMENT OF BOTANY

PO-01 Fundamental Knowledge: Achieve thorough understanding of the basic aspects of Botany, structure & reproduction of various groups of plants and identify them.

PO-02 Problem Solving and Critical Thinking: Apply theoretical knowledge and critical thinking skills to address problems and interpret experimental results.

PO-03 Laboratory Proficiency: Demonstrate proficiency in using laboratory equipment, techniques, and safety protocols while performing the experiments.

PO-04 Research and Innovation: Conduct independent and collaborative research to discover new areas in Botany, utilizing cross-disciplinary methods**.**

PO-05 Data Analysis and Interpretation: Effectively analyse and interpret Biological data using relevant computational tools and statistical methods**.**

PO-06 Teamwork and Leadership: Work collaboratively within diverse teams, showcasing leadership and interpersonal skills to address scientific and societal challenges

PO-07 Communication Skills: Effectively communicate concepts of Botany, research findings, and technical data through written reports, oral presentations, and digital **tools.**

PO-08 Interdisciplinary Integration: Integrate knowledge of Botany with other fields like zoology, physics, chemistry, material science, and engineering to solve complex real-world problems.

PO-09 Ethics and Professionalism: Demonstrate ethical behaviour and integrity in scientific practices.

PO-10 Environment and Sustainability: Understand the chemical processes affecting the environment and apply biological principles to create sustainable solutions for environmental challenges.

PO-11 Entrepreneurship and Industrial Skills: Develop skills that are relevant to industrial applications, entrepreneurship, and innovation in Botany-based industries.

PO-12 Lifelong learning: Adapt to advancements in Botany and related fields for professional development.

PO1: Critical Thinking: Apply the knowledge of Zoology to identify the animal structure, functions, physiology, genetical problems, environmental studies etc to provide and spread information and awareness among the society.

PO2 Effective Communication: Students use electronic media . They can read latest articles, write on specific zoological articles and speak on zoological knowledge in the common language English.

PO3: Social Interaction: Students will be able to explain the relationship between human beings and all ecological factors on the earth by tracing energy and nutrient flows through the environment. They will be able to narrate the physical features of the environment to the structure of populations, communities and the whole ecosystem. Students will understand the concepts of physiology of reproductive system, Menstrual cycle, Placentation and Birth control measures so that they has the awareness program of social issues related to physical violence, Breitbach etc.

PO4: Effective Citizenship: Students will be able to communicate effectively, that's why develop leadership skills, and be responsive to the changing needs of the society.

PO5: Ethics: Zoological students are very well regarding the Human - animal relationship, their system, their physiological functions, animal behaviour science, reproductive and embryological information. They observed and prepared micro preparation with the help of micro techniques even staining procedure and then observed the cell under the binocular and Trinocular compound microscope. Even students also studied of lify cycle, life history of invertebrates and vertebrate's animal. Departments have official animal Ethical committee

PO6: Environment & Sustainability- Human beings play a special role in the ecosystem. They have essential connections between the natural ecosystem and socio-economic system. Zoology students understanding our impact on environment and they understand the important of managing it sustainability.

PO7: Self Directed and Lifelong learning: The subject zoology is useful and knowledgeable related to human beings as well as all invertebrates and vertebrate's animals even the study of zoology is continued after the completion of Degree and P. G. Courses up to the end of the life like the aging process.

DEPARTMENT OF BIOTECHNOLOGY

PO No	DESCRIPTION
PO 01	**Domain Knowledge:** Students will acquire knowledge on the fundamentals of biotechnology for a sound and solid foundation.
PO 02	**Critical Thinking:** Students will be able to acquire knowledge in their domain of interest and thus enabling their applications in industry and research.
PO 03	**Usage of Technology:** Students will be able to gain hands-on experience with relevant tools, technologies, and software applications used in scientific research and industry.
PO 04	**Professional Skills and Ethics:** Students will be capable of applying ethical principles and commit to follow professional ethics, norms and guidelines in the practice of science.
PO 05	**Employability:** Students will be able to acquire jobs/employment in their field of study
PO 06	**Competence & Life skills:** Students will become competent in their chose branch and also acquire the relevant life skills
PO 07	**Environmental Sustainability:** Students will be able t apply relevant concepts in the protection and/or sustainability of environment
PO 08	**Contribution to the Society:** Students will be able to contribute their knowledge and concept gain for the benefit of society
PO 09	**Lifelong Learning:** Students can develop an attitude of lifelong learning for their professional development
PO 10	**Interdisciplinary Research:** Students will be able to conduct research, critically evaluate scientific literature and will be able to work collaboratively in teams
PO 11	**Research Skills:** Students will be equipped to conduct independent research, critically evaluate scientific literature, and contribute to advancements in their discipline.
PO 12	**Entrepreneurship:** Students will be able to establish their own start-ups and support others in the relevant field

DEPARTMENT OF MICROBIOLOGY

POS	DESCRIPTION
PO 01	**Fundamental Knowledge:** Students will acquire a comprehensive understanding of core concepts and theories in their chosen scientific discipline.
PO 02	**Analytical Skills:** They will develop strong analytical and problem-solving skills to tackle complex scientific and mathematical challenges.
PO 03	**Experimental Proficiency:** Graduates will be proficient in designing, conducting, and analyzing experiments using modern laboratory techniques and equipment.
PO 04	**Data Interpretation:** They will be capable of collecting, analyzing, and interpreting data effectively using statistical and computational methods
PO 05	**Theoretical Application:** Students will apply theoretical knowledge to practical scenarios and solve real-world problems in their field of study
PO 06	**Technical Competence:** They will gain hands-on experience with relevant tools, technologies, and software applications used in scientific research and industry.
PO 07	**Research Skills:** Graduates will be equipped to conduct independent research, critically evaluate scientific literature, and contribute to advancements in their discipline.
PO 08	**Communication Abilities:** They will develop the skills to clearly and effectively communicate scientific ideas and findings through written reports and oral presentations.
PO 09	**Ethical Understanding:** Students will understand and adhere to ethical standards in scientific research and professional practice.
PO 10	**Teamwork:** They will be able to work collaboratively in teams, contributing effectively to group projects and scientific investigations.
PO 11	**Problem-Solving:** Graduates will use critical thinking and creativity to develop innovative solutions to complex scientific and technical problems.
PO 12	**Lifelong Learning:** They will foster a commitment to lifelong learning and professional development to keep pace with advances in their field and adapt to emerging trends.

DEPARTMENT OF FOOD TECHNOLOGY

PO 1: Domain Knowledge: Students will have knowledge on the fundamentals of food chemistry and biochemical changes during processing, preservation and packaging of various classes of food and understand food safety and apply sensory evaluation of food, analyze various food safety laws, regulations and acts.

PO 2: Learning and Research: To get broad based training in technical skills in various areas of food technology, Acquire knowledge i and thus enabling their applications in industry and research. Present scientific approach to solve a problem and gain experience in writing scientific proposals.

PO 3: Usage of Technology: To upgrade themselves with the current scientific advancements through various websites and databases. Create social media platforms for effective upgradation on current happenings in the scientific field. Gain knowledge of various scientific databases, retrieve and analyze the data available in them.

PO 4: Professional Skills and Ethics: Identify and address the ethical issues pertaining to science and in its research. Apply ethical principles and commit to follow professional ethics, norms and guidelines in the practice of science.

PO 5: Effective Presentation as Individuals and in Teams: To understand the importance of teamwork. Function effectively as an individual and a member of team with the experience from the participation in the group projects, the laboratory experiments and social extension activities.

PO 6: Competent Communication & Life Skills: Prepare written and oral scientific communications that use tables and graphs to report results, that describe detailed experimental procedures, and that clearly explain conclusions, effectively communicate with

food technology and other interdisciplinary professionals, able to comprehend and write effective project reports and make effective presentations

PO 7: Environmental Sustainability: Understand the impact of the discoveries/innovations or inventions developed through scientific methodologies, in contexts of society and environment. Acquire knowledge on use of technology in consideration with environment sustainability

PO 8: Contribution to Society: Understand their role as part of, both scientific and social societies. Evaluate the role and positive impacts of research in developing solutions that benefit the society.

PO 9: Life-long learning: To understand the dynamism of science, its changing needs technologically and thus inculcate a positive attitude that it is a life-long learning process.

PO 10: Critical thinking skills: Students able to take informed actions by differentiating between fact and opinion, recognize and evaluate, develop inferential skills and distinguish logical assumption from different perspective allow making decisions and judgments by using scientific-based reasoning.

DEPARTMENT OF MBA

POS	DESCRIPTION
PO 01	**Knowledge**: Understanding the fundamental concepts of management such as functions of management, levels and skills of management, theories of management, Leadership and motivation and their significance in professional life
PO 02	**Awareness**: Understanding the legislative and regulatory framework available for the smooth functioning of business in a lawful manner
PO 03	**Application**: Recognize professional prospects outline and execute innovation in the workplace
PO 04	**Communication skills**: Improving proficiency in business correspondence and able to communicate with different stakeholders
PO 05	**Intrapersonal skills**: Ability to improve self-confidence, emotional balance, self - esteem and engage in self-learning
PO 06	**Analytical skills**: Ability to develop analytical thinking and thought process to estimate and analyze different business scenarios and various tends in the economy to make use of various business opportunities
PO 07	**Problem solving skills**: Enhance competencies to adopt and face any situation in the business, formulate strategies to solve the complexities and managerial problems faced by the business enterprises
PO 08	**Managerial skills**: Ability to improve Conceptual, human and technical skills to perform the job in an efficient manner
PO 09	**Professional skills**: To improve the ability to handle, manage and learn the tactics in the management profession mainly focusing on improving leadership skills
PO 10	**Ethical values**: Capability to realise, examine and relate international, economic, legal and ethical aspects of business. Execute, implement and follow the organizational ethics
PO 11	**Proactive and Strategic Thinking:** To infuse proactive thought process to assure productive performance in the dynamic Business environment.
PO 12	**Global Leadership Competencies:** To enhance the students' competencies with needful domain knowledge, skills and attitude requisite to contribute effective leadership in an international business environment

DEPARTMENT OF MCA

PO1	Work with sustainable computing in a multi-disciplinary atmosphere challenging the trends and technologies engaging in lifelong learning.
PO2	Utilize the computing knowledge efficiently in projects with concern for societal, environmental and cultural aspects.
PO3	Function Competently as an individual and as a leader in multidisciplinary projects.
PO4	Create and design innovative methodologies to solve complex problems for the betterment of the society.
PO5	Apply the inherent skills with absolute focus to function as a successful entrepreneur.
PO6	Apply the knowledge of mathematics and computing fundamentals to various real life applications for any given requirement.
PO7	Design and develop applications to analyze and solve all computer science related problems.
PO8	Design applications for any desired needs with appropriate considerations for any specific need on societal and environmental aspects.
PO9	Analyze and review literatures to invoke the research skills to design, interpret and make inferences from the resulting data.
PO10	Integrate and apply efficiently the contemporary IT tools to all computer applications.

DEPRTMENT OF AVIATION MANAGEMENT

1. To provide adequate basic understanding about Management Education among the students and to develop language abilities of students to inculcate writing skills and Business correspondence.
2. To evaluate different business problems using analytical and creative, and integrative abilities and to solve business problems in an ethical manner.
3. To understand finance and other core business content and new venture development.
4. To develop and implement functional and general management skills to make strategic decision in real – era.
5. To build and Demonstrate Leadership, Teamwork, Social skills and communicate effectively in different contexts.
6. To facilitate the students to go for professional courses and to develop ethical reasoning,
professional behavior and entrepreneurial skills.
7. To prepare professional quality business documents and deliver a professional quality business presentation and to develop a global perspective towards various legal issues.
8. To work across multiple functions like operations, trading, project management, consulting, systems / technologies.
9. Work in Public or Private Sectors, Consulting Firms, Funding agencies, power trading and financing companies.
10. Move to managerial positions in Power & related industries or move

DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

1. Technical Proficiency: Graduates should demonstrate a solid understanding of agricultural practices, including crop cultivation, livestock management, and sustainable farming methods.

2. Problem-Solving Skills: The ability to identify and address challenges in agriculture, such as pest control, soil fertility issues, and environmental sustainability.

3. **Innovation and Technology:** Proficiency in using modern agricultural technologies and staying abreast of innovations in the field to enhance productivity and efficiency.

4. **Business Acumen**: Understanding the economic aspects of agriculture, including budgeting, marketing, and entrepreneurship, to succeed in the business side of farming.

5. **Sustainability:** Emphasis on sustainable agricultural practices that consider environmental impact and long-term resource management.

6. **Communication Skills:** The ability to effectively communicate with stakeholders, including farmers, policymakers, and the public, to convey agricultural issues and solutions.

7. **Research and Analysis:** Skills in conducting research, collecting and analyzing data, and applying scientific principles to improve agricultural processes.

8. **Global Perspective:** Awareness of global agricultural challenges and the ability to contribute to solutions on an international scale.

9. **Community Engagement:** Involvement in community development through agriculture, addressing local needs and contributing to food security.

10. **Ethical and Social Responsibility:** Understanding and adherence to ethical standards in agriculture, considering social impacts and responsibilities to society.

DEPARTMENTAL OF PUBLIC POLICY

1. Policy Knowledge and Expertise: Apply principles of economics, political science, law, and sociology to understand and address complex policy issues.

2. Problem Identification and Analysis: Identify, analyze, and prioritize public problems.

3. Design and Formulation of Public Policy: Develop innovative policy solutions considering social, economic, environmental, and legal factors while addressing stakeholder needs.

4. Policy Implementation and Evaluation: Utilize tools and frameworks for effective policy implementation and assess policy outcomes to ensure continuous improvement.

5. Research and Analytical Tools: Employ advanced research methods, data analysis techniques, and modelling tools to inform policy-making and evaluate impacts.

6. Ethical Responsibility and Governance: Demonstrate commitment to ethical principles, transparency, accountability, and inclusiveness in public decision-making.

7. Social Impact and Equity: Assess the social implications of policies to ensure fairness, equity, and inclusivity for marginalized and disadvantaged groups.

8. Sustainability and Global Awareness: Incorporate sustainable development principles in policy design, addressing environmental challenges and global interconnectedness.

9. Leadership and Team Collaboration: Work effectively in multidisciplinary teams, demonstrating leadership and fostering collaboration to address policy challenges.

10. Communication and Advocacy: Communicate policy ideas, findings, and recommendations clearly and persuasively to diverse audiences.

11. Financial and Project Management: Apply knowledge of budgeting, resource allocation, and project management to implement public policies effectively.

12. Lifelong Learning and Adaptability: Demonstrate the ability to adapt to evolving public policy challenges and commit to continuous professional development and learning.

DEPARTMENT OF ANTHROPOLOGY

1. Foundational Knowledge in Anthropology: Demonstrate a comprehensive understanding of the principles, theories, and methods of anthropology, including its four subfields: cultural anthropology, biological anthropology, archaeology, and linguistic anthropology.

2. Cross-Cultural Understanding: Analyze cultural diversity and similarities across societies, using anthropological frameworks to understand human behavior, practices, and beliefs.

3. Application of Anthropological Methods: Employ qualitative and quantitative research methods, such as ethnography, participant observation, and statistical analysis, to investigate and interpret human behavior and cultural phenomena.

4. Holistic Problem-Solving: Address complex societal issues by integrating biological, cultural, linguistic, and archaeological perspectives for a holistic understanding of human life.

5. Ethical Research and Practice: Demonstrate sensitivity to ethical considerations in anthropology, including respect for cultural differences, informed consent, and responsible data management.

6. Human and Environmental Interaction: Evaluate the interplay between humans and their environments across time, emphasizing adaptation, sustainability, and the impacts of climate and ecological changes.

7. Social Impact and Advocacy: Apply anthropological insights to advocate for marginalized communities, address social inequalities, and contribute to public policy formulation and implementation.

8. Cultural Heritage Preservation: Develop strategies for preserving and managing tangible and intangible cultural heritage while respecting indigenous knowledge systems.

9. Interdisciplinary Collaboration: Work effectively with professionals from diverse disciplines to address complex global challenges such as health disparities, migration, and cultural preservation.

10. Communication and Outreach: Communicate anthropological findings effectively to academic, policy-making, and general audiences through writing, presentations, and digital media.

11. Critical Thinking and Analytical Skills: Evaluate anthropological data critically, identifying patterns, relationships, and underlying causes in cultural and social phenomena.

12. Lifelong Learning and Adaptability: Recognize the dynamic nature of human societies and commit to continuous learning to adapt to evolving research methods, technologies, and societal needs.

PRINCIPAL
ANDHRA LOYOLA COLLEGE
VIJAYAWADA-8

ANDHRA LOYOLA COLLEGE

AUTONOMOUS :: VIJAYAWADA - 520 008

Established : 1954

A CHRISTIAN MINORITY COLLEGE WITH CONSTITUTIONALLY PROVIDED RIGHT OF ADMISSION
(AN ISO 14001 : 2015 INSTITUTION)
THE ONLY COLLEGE IN BOTH THE TELUGU STATES TO HAVE BEEN RANKED AMONG
THE TOP 150 COLLEGES BY NIRF SINCE THE INCEPTION OF THE RANKING IN 2017
SELECTED UNDER THE STAR COLLEGE SCHEME OF DBT AND FIST PROGRAMME OF DST, GOVT.OF INDIA
SELECTED FOR ENHANCEMENT OF QUALITY AND EXCELLENCE UNDER RUSA BY MHRD, GOVT.OF INDIA

COURSE OUTCOMES

A College Dedicated to All-Round Development of its Students

Andhra Loyola College
(Autonomous)
VIJAYAWADA-520 008.
Accredited in III Cycle at A+ Grade with a CGPA of 3.66 / 4.00
Web: www. andhraloyolacollege.ac.in e-mail: contactalc@gmail.com

STD	: 0866
Main Off.	: 2476082
Inter	: 2476965
Degree	: 2481907
P.G.	: 2474902
CoE	: 2473251
Fax (Principal)	: 2474531
Fax (Correspondent)	: 2486084

Course Outcomes

DEPARTMENT OF ECONOMICS			
Program	**Semester**	**Course Code**	**Course Name**
B. A	I		FUNDAMENTALS IN SOCIAL SCIENCES

On successful completion of the course, students will be able to
CO 1: Gain a comprehensive understanding of various social science disciplines, such as sociology, psychology, anthropology, economics, and political science.
CO 2: Enhance written and oral communication skills for effectively presenting social science ideas and arguments.
CO 3: Understand how social science concepts can be applied to analyze and address global challenges.
CO 4: Assess the impact of social structures and institutions on individuals and societies.
CO 5: Understand the importance of ethical considerations in social science.

Program	**Semester**	**Course Code**	**Course Name**
B. A	I		PERSPECTIVES ON INDIAN SOCIETY

On successful completion of the course, students will be able to
CO 1: communicate effectively about Indian society. Which includes both written and verbal communication, as well as the capacity to articulate complex sociological concepts in a clear and accessible manner.
CO 2: Enhance students' ability to conduct research and analyze social phenomena.
CO 3: Gain interdisciplinary insights by combining sociological perspectives with other fields such as history, economics, political science, or anthropology.
CO 4: Foster critical thinking on social issues, policy implications, and the impact of globalization.
CO 5: Gain historical perspectives on the evolution of Indian society, social structure of India, including the caste system, class dynamics, and gender roles.

Program	**Semester**	**Course Code**	**Course Name**
B. A	II		MICRO ECONOMICS

On successful completion of the course, students will be able to
CO 1: Understand fundamental economic concepts like supply and demand, market structures, and pricing mechanisms.
CO 2: To analyze economic situations, make decisions based on constraints, and evaluate the impact of various choices.

CO 3: Assess economic policies and understand their effects on individuals, businesses, and society as a whole.
CO 4: Apply economic theories to real-world situations and analyze their outcomes.
CO 5: Understand how firms make decisions, set prices, and allocate resources.

Program	Semester	Course Code	Course Name
B. A	II		MATHEMATICAL METHODS FOR ECONOMICS

On successful completion of the course, students will be able to
CO 1: Develop a strong foundation in mathematical techniques and solve complex economic problems.
CO 2: Make data-driven decisions, which is crucial in the field of economics.
CO 3: Gain proficiency in constructing and interpreting economic models. This skill is helpful for understanding and predicting economic phenomena.
CO 4: Refine problem-solving abilities, enabling them to approach economic challenges with logical and systematic methods.
CO 5: Move beyond economics, opening doors to interdisciplinary collaborations and a broader range of career paths.

Program	Semester	Course Code	Course Name
B.A	III	ECO233DE	DEVELOPMENT ECONOMICS

On successful completion of the course, students will be able to
CO 1: Students will understand the importance of Economic Growth and development, the present chapter creates an awareness on covid-19 immunity aspects.
CO 2: Student's become aware of the growth of different countries and it also help to understand ways to develop with different models.
CO 3: It will develop knowledge among students about the role of developmental theories related to Economic development of a country.
CO 4: Understand Strategies of Economic Development and Role of Infrastructure in Economic Development.
CO 5: India is a developing country so as a student of this country there must know the role of economic development and also must have an idea about market failure and attaining economic development with the help of International Institutions.

Program	Semester	Course Code	Course Name
B.A	IV	ECO244EDIAP	ECONOMIC DEVELOPMENT- INDIA AND ANDHRA PRADESH

On successful completion of the course, students will be able to
CO 1: To understand the basic features of the Indian economy and its development since independence, and also to understand the planning structure and the place of the Indian economy in the Human Development Index.
CO 2: Be able to understand the national income, trends and the problems of unemployment, poverty in the economy along with the measures to correct them.
CO 3: Get to know about Indian agriculture, various policies relating to agriculture and the programmes implemented by the government to improve the industrial sector.
CO 4: Utilize the knowledge of taxation to understand the impact on commerce and industry and also to analyze the state central relations.
CO 5: The key changes in Andhra Pradesh state after bifurcation in 2014 and the problems faced by it after separation.

Program	Semester	Course Code	Course Name
B.A	IV	ECO245SME	STATISTICAL METHODS FOR ECONOMICS

On successful completion of the course, students will be able to
CO 1: Understand about the nature and importance of statistics in economics, types of data and sampling, and its collection methods.
CO 2: To analyze the data collection methods, and tabular and graphical presentation of data.
CO 3: To understand about the measures of central tendency namely mean median, mode and measures of dispersion.
CO 4: Able to know correlation and various types along with regression and its uses in real life.
CO 5: Analyze time series and measurement of time series and also index numbers, types, uses and limitations.

Program	Semester	Course Code	Course Name
B.A	V	ECO356IS	INSURANCE SERVICES

On successful completion of the course, students will be able to
CO 1: Understand the framework of insurance in India.
CO 2: Assimilate different types of insurance products sold in India & how insurance policy satisfy customer requirements.
CO 3: Adapt different types of life insurance products sold in India & how product meets customer needs.
CO 4: Understand documentation & processing of life insurance proposal forms, claim settlement and surrender of life insurance policy.
CO 5: Be provided with the knowledge of risk and rewards of general insurance

Program	Semester	Course Code	Course Name
B.A	V	ECO357IS	Banking and Financial Services

At the end of the course students will be able to
1. Financial Analysis Skills: Develop proficiency in analyzing financial statements, assessing risk, and evaluating investment opportunities.
2. Banking Operations Knowledge: Acquire knowledge of banking operations, including deposit-

taking, lending, credit evaluation, and risk management.
3. Customer Relationship Management: Develop skills in building and maintaining customer relationships, understanding customer needs, and providing appropriate financial solutions.
4. Financial Products and Services: Gain familiarity with various financial products and services offered by banks and other financial institutions, such as loans, mortgages, investment products, and insurance.
5. Risk Management: Learn techniques for identifying, assessing, and mitigating financial risks faced by banks and financial institutions, including credit risk, market risk, and operational risk.
6. Ethical and Professional Standards: Understand the importance of ethical behavior and professionalism in the banking and financial industry and adhere to ethical standards and codes of conduct.
7. Financial Technology (Fintech): Explore the impact of technological innovations on banking and financial services, including digital banking, mobile payments, block chain, and artificial intelligence.

DEPARTMENT OF HINDI			
Program	Semester	Course Code	Course Name
B.A, B.Com & B.Sc	I	HIN 111 PNG	Prose, Non-Detailed & Applied Grammar - I
At the end of the course Student will CO 1: Get the scope for linguistic skills of Hindi. CO 2: Understand 'Unity in Diversity'. CO 3: For the better understanding in grammar concepts CO 4: Adapt noble values of Life. CO 5: Get the knowledge of different Grammar concepts in Hindi. CO 6: Help the society by their skills & abilities.			
Program	Semester	Course Code	Course Name
B.A, B.Com & B.Sc	II	HIN 122 PNG	Prose, Non-Detailed & Applied Grammar - II
At the end of the course Student will CO 1: Get the scope for linguistic skills of Hindi. CO 2: Promote perfect use of Vocabulary CO 3: For the better understanding in grammar concepts CO 4: Adapt moral values and ethical values so that students can try to build good character CO 5: Understands the structure of translation methods CO 6: Help the society by their skills & abilities.			
Program	Semester	Course Code	Course Name
B.A, B.Com & B.Sc	III	HIN 233 HLT	Poetry, History of Hindi Literature & Translation

At the end of the course Student will
CO 1: Get a brief knowledge of history of Hindi literature
CO 2: Get the scope for literary skills of Hindi
CO 3: Gain Hindi translational skills.
CO 4: Emphasize the responsibilities of humans towards nature.
CO 5: Behave as a Virtual Oriented person in society.
CO 6: Attain skills in writing and speaking.

DEPARTMENT OF SANSKRIT			
Program	Semester	Course Code	Course Name
B.A, B.Com & B.Sc	I	SAN 111 PPG	Prose, Poetry and Grammar

At the end of the course student will
CO1: Get a brief knowledge of Sanskrit literature
CO2: Understand the Sanskrit syntax through the grammar
CO3: Get the skills of pronunciation, reading, writing and reciting Sanskrit accurately and fluently.
CO4: Can analyze merit sand demerits of the society
CO5: Understand the structure of translation methods
CO6: Can study Sanskrit texts such as Ramayana, Mahabharata and Bhagavadgita which are the source of Indian culture and traditions

Program	Semester	Course Code	Course Name
B.A, B.Com & B.Sc	II	SAN 122 PPG	Prose, Poetry and Grammar

At the end of the course student will
CO1: Get a brief knowledge of Sanskrit literature
CO2: Understand the Sanskrit syntax through the grammar
CO3: Get the skills of pronunciation, reading, writing and reciting Sanskrit accurately and fluently.
CO4: Can analyze merits and demerits of the society
CO5: Understand the structure of translation methods
CO6: Can study Sanskrit texts such as Ramayana, Mahabharata and Bhagavad Gita which are the source of Indian culture and traditions

Program	Semester	Course Code	Course Name
B.A, B.Com & B.Sc	III	SAN 233 DHS	Drama, Alankaras and History of Sanskrit Literature

At the end of the course student will
CO1: Get a brief knowledge of Sanskrit literature
CO2: Understand the Sanskrit syntax through the grammar
CO3: Get the skills of pronunciation, reading, writing and reciting Sanskrit accurately and fluently.
CO4: Can analyze merit and demerits of the society CO5: Understand the structure of translations
CO6: Can study Sanskrit texts such as Ramayana, Mahabharata and Bhagavad Gita which are the source of Indian culture and traditions

DEPARTMENT OF COMPUTER SCIENCE			
Program	Semester	Course Code	Course Name
B.Sc.(MPCs, MSCs, MECs,	I	CSC111PPP	Problem Solving using Computers & Python Programming

Upon successful completion of the course, a student will be able to:
CO 1: Learn to apply fundamental problem-solving techniques.
CO 2: Describe the core syntax and semantics of Python programming language.
CO 3: Learn and understand python looping, control statements and string manipulations.
CO 4: Define and demonstrate the use of built-in data structures lists, dictionaries, tuples and sets
CO 5: Understand the Python programming language and it's rich set of libraries, applications where Python programming is effective

Program	Semester	Course Code	Course Name
B.Sc.(MPCs, MSCs, MECs,	II		Digital Logic Design

Upon successful completion of the course, a student will be able to:
CO 1: Understand the working of a digital computer and Fundamental constructs of Programming
CO 2: Analyze and develop a solution to a given problem with suitable control structures
CO 3: Apply the derived data types in program solutions
CO 4: Use the ‘C’ language constructs in the right way
CO 5: Apply the Dynamic Memory Management for effective memory utilization

Program	Semester	Course Code	Course Name

B.Sc.(MPCs, MSCs, MECs,	III	CS233DBMS	DBMS

On completing the subject, students will be able to:
CO 1: Understand the fundamental concepts of DBMS with special emphasis on relational data model.
CO 2: Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database
CO 3: Model database using ER Diagrams and design database schemas based on the model.
CO 4: Create a small database using SQL.
CO 5: Store, Retrieve data in database.

Program	Semester	Course Code	Course Name
B.Sc.(MPCs, MSCs, MECs,	IV	CSC244OS	Operating Systems

At the end of the course student will
CO 1: Know Computer system resources and the role of operating system in resource management with algorithms
CO 2: Understand Operating System Architectural design and its services.
CO 3: Gain knowledge of various types of operating systems including Unix and Android.
CO 4: Understand various process management concepts including scheduling, synchronization, and deadlocks. 5. Have a basic knowledge about multithreading.
CO 5: Comprehend different approaches for memory management.
CO 6: Understand and identify potential threats to operating systems and the security features design to guard against them.
CO 7: Specify objectives of modern operating systems and describe how operating

Program	Semester	Course Code	Course Name
B.Sc.(MPCs, MSCs, MECs,	IV	CSC 245OPJ	Object Oriented Programming With Java

After successful completion of the course, the students are able to At the end of the course student will
CO 1: Understand the benefits of a well-structured program
CO 2: Understand different computer programming paradigms
CO 3: Understand underlying principles of Object-Oriented Programming in Java
CO 4: Develop problem-solving and programming skills using OOP concepts
CO 5: Develop the ability to solve real-world problems through software development in high-level programming languages like Java.

Program	Semester	Course Code	Course Name

B.Sc.(MPCs, MSCs, MECs,	V	CS356WDT	Web Interface Designing Technologies

Upon successful completion of the course, a student will be able to:
CO 1: Understand and appreciate the web architecture and services.
CO 2: Gain knowledge about various components of a website.
CO 3: Demonstrate skills regarding creation of a static website and an interface to dynamic website.
CO 4: Learn how to install word press and gain the knowledge of installing various plugins to use in their websites.

Program	Semester	Course Code	Course Name
B.Sc.(MPCs, MSCs, MECs,	V	CS356WDT	Web Interface Designing Technologies (LAB)

. On successful completion of this practical course, student shall be able to:
CO 1: Create a basic website with the help of HTML and CSS.
CO 2: Acquire the skill of installing word press and various plugins of Word press.
CO 3: Create a static website with the help of Word press.
CO 4: Create an interface for a dynamic website.
CO 5:Apply various themes for their websites using Word press.

Program	Semester	Course Code	Course Name
B.Sc.(MPCs, MSCs, MECs,	V	CS357WAD(P)	Web Applications Development using PHP & MYSQL LAB

On successful completion of this practical course, student shall be able to:
CO1: Write, debug and implement the Programs by applying concepts and error handling techniques of PHP.
CO2: Create an interactive and dynamic website.
CO3: Create a website with reports generated from a database.
CO4: Write programs to create an interactive website for e-commerce sites like online shopping, etc

DEPARTMENT OF STATISTICS

Program	Semester	Course Code	Course Name
B. Sc.	II		Descriptive Statistics

CO 1: Understand the scope and necessity of Statistics
CO 2: Tabulate and represent the data in diagrams and graphs.
CO 3: Apply the formula and calculate descriptive measures of statistics.
CO 4: Analyze the nature of data and interpret the measures.
CO 5: Compute probabilities using classical, statistical and axiomatic approach.

Program	Semester	Course Code	Course Name
B. Sc.	II		Random Variables and Mathematical Expectations

CO 1: Understand the concept of random variables and solve the problems in mathematical expectations.
CO 2: Calculate the expectation and moments of random variables.
CO 3: Identify the applications of various moment inequalities.
CO 4: Analyze the properties and applications of various probability functions and Weak law of Large Numbers
CO 5: Apply the various laws of large numbers to sequences of random variables.

Program	Semester	Course Code	Course Name
B. Sc.,(MSP, MSCs)	III	STA233SMS	Statistical Methods & Exact Sampling Distributions

CO 1: Analyze the data pertaining to attributes and to interpret the results.
CO 2: To recognize and evaluate the relationship between two quantitative variables through simple linear correlation and regression.
CO 3: To understand the relationship between sample statistics and population parameters.
CO 4: Knowledge of interval estimation and estimation of parameters using the method of moments and MLE.
CO 5: To understand exact sampling distribution

Program	Semester	Course Code	Course Name
B. Sc.,(MSP, MSCs)	IV	STA244SI	Statistical Inference

CO 1: Advances knowledge of statistical modeling via point estimation, hypothesis testing and confidence intervals.
CO 2: Ability to convert various problems of practical interest into statistical models and make inference on it.
CO 3: Students will be able to discern the different aspects of statistical modeling.
CO 4: Able to understand the difference between parametric and non parametric tests and applications of various non parametric tests
CO 5: Ability to apply statistical concepts and statistical techniques with respect to the point estimation, hypothesis testing and confidence sets.

Program	Semester	Course Code	Course Name

B. Sc.,(MSP, MSCs)	IV	STA245AS	Advanced Statistics

CO 1: Understand census data, Fertility and Mortality rates, standardized death rates, components of complete and abridged life tables, reproduction rates. Notation of population projection.
CO 2: Able to understand the different components of time series, analysis of time series data and measurement of trend and its applications.
CO 3: Analysis of time series data and measurement of seasonal variations – methods and its applications. Use of multiplicative model in measurement of seasonal fluctuations.
CO 4: Understanding the Concept of Index numbers, calculation of unweighted and weighted different index numbers for price and quantity, construction of cost of living index number and whole sale price index numbers.
CO 5: Understanding the Concept of demand and supply, price elasticities of supply and demand, methods of determining demand and supply curves and Pareto law of income distribution curves of concentration

Program	Semester	Course Code	Course Name
B. Sc.,(MSP, MES, MSCs)	V	STA356OR	Operations Research

CO 1: Development of Operations Research(OR), Scope, Features and Management application of OR, Role of OR in decision making, Development of OR in India. Role of computers in OR.
CO 2: Understand the concept of Sequencing Problem, Johnson's algorithm for Processing n Jobs through two machines, processing n jobs through three machines, processing two jobs through m machines.
CO 3: Understand the concept of Assignment problem, Formulation of mathematical model and to solve Assignment problems with Hungarian method.
CO 4: Understand the concept of Transportation problem, Formulation of mathematical model and to find initial basic feasible solution and optimal solution using Modified Distribution method.
CO 5: Understand the concept of Competitive strategies, Principle of Minimax and Maximin rule, definitions of Saddle point, Payoff matrix, Zero Sum game and Value of the game, Dominance and modified dominance property and its applications.

Program	Semester	Course Code	Course Name
B. Sc.,(MSP, MES, MSCs)	VI	STA357BDR	Basic Statistical Data Analysis Using R

CO 1: Get basic knowledge on data types, functions and packages in R.
CO 2: Understand the functioning of the data in R
CO 3: Apply R-functions to data visualization.
CO 4: Generate statistical analysis viz., fitting of curves and probability distribution using R.
CO 5: Importing data and code editing, applying Hypothesis testing and generating statistical analysis.

Statistics - Big data Analytics, Artificial Intelligence

Program	Semester	Course Code	Course Name

B. Sc., (Big data Analytics, Artificial Intelligence)	III	STA233PD	Probability Distributions

CO 1: Univariate discrete probability distributions viz., Bernoulli Binomial and Poisson distributions, properties and their applications
CO 2: Univariate discrete probability distributions viz., Negative Binomial, Geometric and Hypergeometic distributions, properties and their applications
CO 3: Univariate continuous probability distribution - Normal distribution properties and its applications, standard normal variate, problems on normal area property
CO 4: Univariate continuous probability distributions viz., Cauchy, Exponential, Gamma and Beta Hypergeometic distributions, properties and their applications
CO 5: Concept of population, sample, parameter and statistic. Sampling distribution of data and basic sampling distribution viz., t, F and Chi square and its properties and their interrelationships

Program	Semester	Course Code	Course Name
B. Sc., (Big data Analytics, Artificial Intelligence)	IV	STA244ETH	Basic Theory of Estimation & Testing of Hypothesis

CO 1: Concept of Estimation –properties of good estimator and method of parametric estimation and confidence intervals
CO 2: Applications of large sample tests for variables and attributes and Fishers Z transformation and its applications
CO 3: Applications of small sample tests viz., t- test for single mean, equality of two means, paired observations and sample correlation coefficients,. F test for equality of two variances
CO 4: Chi-Square test for Goodness of fit and Independence of Attributes
CO 5: Able to understand the difference between parametric and non parametric tests and applications of various non parametric tests

Program	Semester	Course Code	Course Name
B. Sc., (Big data Analytics, Artificial Intelligence)	V	STA355AS	Applied Statistics

CO 1: Concept of population and sample, census and sample survey, sampling errors, probability and non probability sampling techniques. Simple random sampling, Stratified and Systematic sampling and their properties
CO 2: Select and design an appropriate method of data collection for a research project; Apply basic principles in the design of simple experiments viz., ANOVA, CRD and RBD designs
CO 3: Able to understand the different components of time series, analysis of time series data and measurement of trend and its applications.
CO 4: Understanding the Concept of Index numbers, calculation of unweighted and weighted different index numbers for price and quantity, construction of cost of living index number and whole sale price index numbers.
CO 5: Idea of Statistical Quality Control (SQC), process and product control, 3 sigma limits and control charts for attributes and variables.

Program	Semester	Course Code	Course Name
B. Sc	I		Essentials and applications of mathematical, physical, and chemical sciences

CO1: Apply critical thinking skills to solve complex problems involving complex numbers, trigonometric ratios, vectors, and statistical measures.
CO2: Understand the interplay and connections between mathematics, physics, and chemistry in various applications. Recognize how mathematical models and physical and chemical principles can be used to explain and predict phenomena in different contexts

Program	Semester	Course Code	Course Name
B. Sc	I		Advances in mathematical, physical and chemical sciences

CO 1: Explore the applications of mathematics in various fields of physics and chemistry, to understand how mathematical concepts are used to model and solve real-world problems.
CO 2Understand the interplay and connections between mathematics, physics, and chemistry in various advanced applications. Recognize how mathematical models and physical and chemical principles can be used to explain and predict phenomena in different contexts

Program	Semester	Course Code	Course Name
B. Sc (MPC, MSP, MSCs, MCsP, MECs)	III	MAT 233AA	Abstract Algebra

At the end of the course students will be able to:
CO 1: acquire the basic knowledge and structure of groups, subgroups and cyclic groups.
CO 2: get the significance of the notation of a normal subgroup.
CO 3: understand permutations in Group Theory and operations on them.
CO 4: study the homomorphisms and isomorphisms with applications.
CO 5: understand the basic concepts in ring theory.
CO 6: understand the applications of ring theory in various fields.

Program	Semester	Course Code	Course Name
B.Sc., (M,BD,S)(M,AI,S)	III	MAT233DM	Discrete Mathematics

At the end of the course students will be
CO 1: able to apply principles and concepts of discrete mathematics in practical situations.
CO 2: able to Identify basic concepts of trees, rooted trees and boolean algebra expressions.
CO 3: able to compute the distance in graphs and weighted graphs.
CO 4: able to find a relation that is reflexive, anti symmetric and transitive.
CO 5: able to apply this knowledge in computer science applications.
CO 6: able to understand the various types of properties of sets and logical gates

Program	Semester	Course Code	Course Name
B. Sc (MPC, MSP, MSCs, MCsP, MECs)	IV	MAT244RA	Real Analysis

At the end of the course students will be able to:
CO 1: identify the behavior of a sequence by employing relevant results
CO 2: analyzethe nature of a series by applying suitable test ofconvergence
CO 3: verify the continuity of a function and type of discontinuity
CO 4: apply the geometrical interpretation of differentiation and mean value theorems
CO 5: prove fundamental theorem and mean value theorems using the concept of Riemann integration
CO 6: solve problems in Real analysis using the inter dependability of continuity and differentiation of the real valued functions and Riemann integration of a bounded function.

Program	Semester	Course Code	Course Name
B. Sc (MPC, MSP, MSCs, MCsP, MECs)	IV	MAT 245 LA	Linear Algebra

At the end of the course student will
CO 1: understand the concepts of vector spaces, subspaces and their properties
CO 2: understand the concepts of basis, dimension and their properties
CO 3: understand the concepts of elementary matrix operations
CO 4: understand the concepts of linear transformations and their properties
CO 5: be able to describe the concepts of eigenvalue, eigenvector andcharacteristic polynomials
CO 6: understand the properties of inner product spaces and determine orthogonality in inner product spaces.

Program	Semester	Course Code	Course Name
B.Sc., (M,BD,S) (M,AI,S)	IV	MAT244NA	Numerical Analysis

At the end of the course students will be able CO CO 1: gain basic knowledge in Numerical methods.
CO 2: use several methods of solving algebraic and transcendental equations of one variable.
CO 3: recognize the contribution and impacts of Numerical Analysis in real life problems.
CO 4: analyzeand interpret information from a variety of sources relevant to Numerical Analysis.
CO 5: use information and communication technology to discuss problems relevant to Numerical Analysis.

Program	Semester	Course Code	Course Name
B.Sc., (M,BD,S) (M,AI,S)	V	MAT256NM	Numerical Methods

CO 1: understand the subject of various numerical methods that are used to obtain approximate solutions
CO 2: Understand various finite difference concepts and interpolation methods.
CO 3: Work out numerical differentiation and integration whenever and wherever routine methods are not applicable.
CO 4: Find numerical solutions of ordinary differential equations by using various numerical methods.
CO 5: Analyze and evaluate the accuracy of numerical methods.

Program	Semester	Course Code	Course Name
B.Sc., (M,BD,S) (M,AI,S)	V	MAT257MSF	Speciial Functions

CO 1: Students will gain a comprehensive understanding of special functions,
CO 2: Students will develop strong problem-solving skills by applying properties, transformations, and generating functions associated with special functions.
CO 3: Students will learn to create mathematical models for real-world phenomena using special functions.
CO 4: Students will master various analytical techniques, including orthogonal properties, recurrence relations, and generating functions.
CO 5: Students will be introduced to advanced mathematical concepts such as differential equations and integrals.

Program	Semester	Course Code	Course Name
B.Sc / B.A (Mathematics CC)	I	MAT CC QA	Quantitative Aptitude

At the end of the course student will be able to
CO 1: improve the basic Mathematical skills which will be useful in the preparation for any type of Competitive examination.
CO 2: Enhance the problem solving skills by developing a strong foundation in Mathematics.
CO 3: apply the skills and competencies acquired in the related areas.
CO 4: demonstrate number sense, including dimensional analysis and conversions between fractions, decimals, and percentages.
CO 5: determine when approximations are appropriate and when exact calculations are necessary.

DEPARTMENT OF ELECTRONICS

Program	**Semester**	**Course Code**	**Course Name**
Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MECS)	III	ELE235MP	Microprocessors

At the end of the course student will
CO 1: Describe the architecture of 8085 and 8086:
CO 2: Illustrate the organization of registers and memory in microprocessors.
CO 3: Differentiate Minimum and Maximum Mode bus cycle.
CO 4: Identify the addressing mode of an instruction.
CO 5: Develop programming skills in assembly language. CO 6: Explain the need for different interfacing devices. CO 7: Compare the concepts of CISC and RISC processors.
CO 8: Recall and apply a basic concept of digital fundamentals to Microprocessor based personal computer system.
CO 9: Identify a detailed s/w & h/w structure of the Microprocessor.

Program	Semester	Course Code	Course Name
B.Sc. (MECS)	III	ELE236LDF	LED Lighting Design Fundamentals and Testing

At the end of the course student will
CO 1: Understand basics of LED technology and distinguish working principle of LED, incandescent, fluorescence, CFL and HID lamps.
CO 2: Know importance of proper thermal, electrical, mechanical and optical design of LED luminaires and interpretation of LED data sheets.
CO 3: Understand importance of secondary optics in LED luminaries and dependance of viewing angle, illuminance factor of a luminaire on secondary optics.
CO 4: Analyze role of diffuser in elimination of multiple source shadow effect of LED luminaire and minimizing glaring effect.
CO 5: Estimate viewing angle, Illuminance pattern and efficacy of a given luminaire.
CO 6: Design constant voltage, constant current power supplies with required power rating and protections.
CO 7: Estimate heat dissipation at different stages of LED luminaire- at junction, on PCB footprints, bottom of PCB and inside the enclosure. Thermal performance'
CO 8: Access LED luminaire electrically, thermally, optically and mechanically.

Program	Semester	Course Code	Course Name
B.Sc. (MECS)	IV	ELE248SLA	Solid State Lighting Applications

At the end of the course student will
CO 1: Understand various photometric quantities, importance of these quantities in lighting applications.
CO 2: Identify different types of solid state luminaires and their applications. Suggested illuminance levels for various applications.
CO 3: Plan and design lighting for residential and retail areas, able to draw lighting design layout and ableto evaluate lighting design.
CO 4: Plan and lighting design for any type of road, able to design lighting poles with arm inclination.
CO 5: Evaluate given light source electrically, optically and thermally. Estimate efficiency of given light source.
CO 6: Understand difference between rail and road signal lighting and evaluation Design smart lighting control system with Wi-Fi, Bluetooth and IR communication.

Program	Semester	Course Code	Course Name

B.Sc. (MECS)	V	ELE359MCI	Micro Controller and Interfacing

At the end of the course student will
CO 1: Give an understanding about the concepts and basic architecture of 8051
CO 2: Provide an overview of difference between microprocessor and microcontroller
CO 3: Provide background knowledge and core expertise in microcontroller
CO 4: Study the architecture and addressing modes of 8051
CO 5: Impart knowledge about assembly language programs of 8051
CO 6: Help understand the importance of different peripheral devices & their interfacing to 8051
CO 7: Impart knowledge of different types of external interfaces including LEDS, LCD, Keypad Matrix, Switches & Seven segment display

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MECS)	V	ELE35XCS	Communication Systems

At the end of the course student will
CO 1: Understand different modulation and demodulation techniques used in analog communication Compare and contrast design issues, advantages, disadvantages and limitations of analog communication systems
CO 2: Apply knowledge in
A. Elements of Pulse and Digital Communication systems
B. Various types of pulse modulations
C. Digitization techniques such as PCM & DPCM
D. both the multiplexing techniques
E. Digital carrier modulation techniques ASK, FSK
CO 3: Overview of optical fiber communication system, its importance and applications
CO 4: To make students familiar with various generations of mobile communications 2G, 2: 5G, 3G with their characteristics and limitations.
A. To understand the concept of cellular communication
B. To understand the basics of wireless communication
CO 5: Understand GSM, CDMA concepts and architecture, frame structure, system capacity, services provided.
A. summarize the principles and applications of wireless systems and standards
B. Demonstrate an ability explain multiple access techniques for Wireless Communication

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MECS)	VI	ELE36XIAMC	Advanced Microcontrollers

At the end of the course student will
CO 1: Importance of C in embedded systems, ANSI standards, fundamentals of C, data types, constants, formatted IO, loops, function, arrays and pointers.
CO 2: Understanding of PIC microcontroller, features of PIC, register organization, PIC reset actions, oscillator connections, PIC memory organization, PIC instructions, PIC addressing modes, I/O ports & interrupts, PIC timers, PIC ADC.
CO 3: Understand the ARM7TDMI, cortex –m0, m3, m4, multi core processors and feature trends, study of ARM cortex-m3 and core and controllers, introduction to firmware life cycle basics on firmware IDE's and their debugging & simulation technologies.
CO 4: Data communication, Serial communication, communication modes and interruptprogramming.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc. (MECS)	VI	ELE36XIIC1PE	Power Electronics

At the end of the course student will
CO 1: Will know about the generation of power electronics and family of thyristors
CO 2: Will know about the basic thyristor-SCR and its applications.
CO 3: Will know about other thyristors like diac, triac ,igbt, power MOSFET.
CO 4: Will know about the procedure to convert ac to dc as a chopper concept.
CO 5: Will know about single phase power supply and their types with and without reactive feedback.
CO 6: Will know about the types of motor, their construction, thyristor-based motors

ELECTRONIC TECHNOLOGY

Program	**Semester**	**Course Code**	**Course Name**
B.Sc.(ELE CS)	III	ELE235MP	Microprocessors

At the end of the course student will
CO 1: Describe the architecture of 8085 and 8086:
CO 2: Illustrate the organization of registers and memory in microprocessors.
CO 3: Differentiate Minimum and Maximum Mode bus cycle.
CO 4: Identify the addressing mode of an instruction.
CO 5: Develop programming skills in assembly language.
CO 6: Explain the need for different interfacing devices.
CO 7: Compare the concepts of CISC and RISC processors.
CO 8: Recall and apply a basic concept of digital fundamentals to Microprocessor based personal computer systems.
CO 9: Identify a detailed s/w & h/w structure of the Microprocessor.
CO 10: Illustrate how the different peripherals (8255, 8253 etc.) are interfaced with Microprocessor.
CO 11: Train their practical knowledge through laboratory experiments.

Program	**Semester**	**Course Code**	**Course Name**
B.Sc.(ELE CS)	III	ELE236LDF	LED Lighting Design Fundamentals and Testing

At the end of the course student will

CO 1: Understand basics of LED technology and distinguish working principle of LED, incandescent, fluorescence, CFL and HID lamps.
CO 2: Know importance of proper thermal, electrical, mechanical and optical design of LED luminaires and interpretation of LED data sheets.
CO 3: Understand importance of secondary optics in LED luminaries and dependence of viewing angle, illuminance factor of a luminaire on secondary optics.
CO 4: Analyze role of diffuser in elimination of multiple source shadow effect of LED luminaire and minimizing glaring effect.
CO 5: Estimate viewing angle, Illuminance pattern and efficacy of a given luminaire.

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	III	ELT233BN	Basics of Networks

At the end of the course student will

CO 1: Know about Computer Network basics and types of Networking, different types of Network Topologies. Definitions and introduction of Internet, Ethernet, Wi-Fi, Bluetooth, Mobile Networking, Wire and wireless Networking.
CO 2: Know about Communication Media & Connectors and different types of cable. Understand color codes of CAT5 cable.
CO 3: Know about Data Communication types of Communication and Serial port Checking Software in both terminal and nonterminal methods.
CO 4: Know about Sessions and presentation aspects of DNS, Telnet, rlogin, FTP, SMTP WWW Basics of Firewalls
CO 5: Packet switching networks, Frame Relay networks, Asynchronous transfer mode ATM in detail.
CO 6: Know about different types of Networking Components like Hubs, Bridges, Gateways.
CO 7: How to address, types of addressing, Subnetting , types of subnetting, Domain, types of domain.
CO 8: Know about networking protocols.

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	IV	ELE247EI	Electronic Instrumentation

At the end of the course student will
CO 1: Measure various electrical parameters with accuracy, precision, resolution.
CO 2: Use AC and DC bridges for relevant parameter measurement.
CO 3: Select appropriate passive or active transducers for measurement of physical Phenomenon.
CO 4: Use Signal Generator, frequency counter, CRO and digital IC tester for Appropriate measurement.
CO 5: Test and troubleshoot electronic circuits using various measuring instruments. vi. Maintain various types of test and measuring instruments.
CO 6: Ability to identify, apply and distinguish sensor and transducers for measurement of Biological parameters in medical instrumentation systems.
CO 7: Ability to design, assemble, analyze, and evaluate basic circuits in medical Instrumentation.

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	IV	ELE249MCI	Micro controller and Interfacing

At the end of the course student will
CO 1: Give an understanding about the concepts and basic architecture of 8051
CO 2: Provide an overview of difference between microprocessor and microcontroller
CO 3: Provide background knowledge and core expertise in microcontroller
CO 4: Study the architecture and addressing modes of 8051
CO 5: Impart knowledge about assembly language programs of 8051
CO 6: Help understand the importance of different peripheral devices & their interfacing to 8051
CO 7: Impart knowledge of different types of external interfaces including LEDS, LCD, Keypad Matrix, Switches & Seven segment display

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	IV	ELT244CNS	Computer Networks and Network Security

At the end of the course student will

CO 1: Know about implementing a computer network mainly on fundamentals of wireless network, performance, Wireless Network Structure and components, Difference between Wired and Wireless Network

CO 2: Know about Packet switching and circuit switching and different types of data processing methods

CO 3: Know about Hardware upgrade, Software upgrades and Network upgradesCO 4: Know about Backing up network data- different types of Backups, scheduling backups, backing up and restoring data.

CO 5: Know about Network security, Authentication and authorization, user level security and share level security. Auditing and configuring auditing audit policy.

CO 6: Know about Firewall-architecture of firewall, types of firewalls, internet protocol security-enabling Internet Protocol Security (IP Sec) on windows 2000 server.

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	V	ELE35XCS	Communication Systems

At the end of the course student will

CO 1: Overview of optical fiber communication system, its importance and applicationsCO 4: To make students familiar with various generations of mobile communications 2G, 2: 5G, 3G with their characteristics and limitations.

CO 2: Understand GSM, CDMA concepts and architecture, frame structure, system capacity, services provided.

A. summarize the principles and applications of wireless systems and standards
B. Demonstrate an ability explain multiple access techniques for Wireless Communication

CO 3: Solve problems pertaining to modulation schemes, transmitters and receivers.

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	V	ELE35XIAMC	Advanced Microcontrollers

At the end of the course student will

CO 1: Importance of C in embedded systems, ANSI standards, fundamentals of C, data types, constants, formatted IO, loops, function, arrays and pointers.
CO 2: Understanding of PIC microcontroller, features of PIC, register organization, PIC reset actions, oscillator connections, PIC memory organization, PIC instructions, PIC addressing modes, I/O ports & interrupts, PIC timers, PIC ADC.

CO 3: Understand the ARM7TDMI, cortex –m0, m3: m4, multi core processors and feature trends, study of ARM cortex-m3 and core and controllers, introduction to firmware life cycle basics on firmware IDE's and their debugging & simulation technologies.
CO 4: Data communication, Serial communication, communication modes and interrupt programming.
CO 5: Introduction and interfacing controllers of wired & wireless communication UART, SPI, I2C, CAN interfacing Zigbee, wi-fi and Bluetooth.
CO 6: Understanding the basic concepts of sensors and actuators, cloud computing and atmega328 microcontrollers, Arduino platform, open source microcontroller platforms, Arduino board layout & architecture Arduino programming fundamentals, sensors interfacing with Arduino, temperature sensor, DHT11, Ultrasonic sensor and wi-fi

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	V	ELE35XIIPE	Power Electronics

At the end of the course student will
CO 1: Will know about the generation of power electronics and family of thyristors
CO 2: Will know about the basic thyristor-SCR and its applications.
CO 3: Will know about other thyristors like diac, triac ,igbt, power MOSFET.
CO 4: Will know about the procedure to convert ac to dc as a chopper concept.
CO 5: Will know about single phase power supply and their types with and without reactive feedback.
CO 6: Will know about the types of motor, their construction, thyristor-based motor

Program	Semester	Course Code	Course Name
B.Sc.(ELE CS)	V	ELE35XIIIRES	Renewable Energy Sources

At the end of the course student will

CO 1: Identify energy demand and relate with available energy resources. Describe the environmental aspects of non-conventional energy resources. In Comparison with various conventional energy systems, their prospects and limitations. Know the need of renewable energy resources, historical and latest developments.

CO 2: Estimate the solar energy, Utilization of it, Principles involved in solar energy collection and conversion of it to electricity generation with respect to applications like - heating, cooling, desalination, power generation, drying, cooking etc.

CO 3: Explore the concepts involved in wind energy conversion system by studying its components used in energy generation and know the classifications, types and performance.

CO 4: Illustrate Ocean energy and explain the operational methods of their utilization.

CO 5: Acquire the knowledge on Geothermal energy.

CO 6: Solve problems pertaining to modulation schemes, transmitters and receivers.

CO 7: Acquire the knowledge of fuel cells, wave power, tidal power and geothermal principles and applications.

PHYSICS			
Program	Semester	Course Code	Course Name
B.Sc.	I		Essentials and applications of mathematical, physical and chemical sciences

CO 1: To Explain the basic principles and concepts underlying a broad range of fundamental areas of physics and to Connect their knowledge of physics to everyday situations

CO 2: Understand the interplay and connections between mathematics, physics, and chemistry in various applications. Recognize how mathematical models and physical and chemical principles can be used to explain and predict phenomena in different contexts.

Program	Semester	Course Code	Course Name
B.Sc.	I		Advances in mathematical, physical and chemical sciences

By successful completion of the course, students will be able to:

CO 1: To Explain the basic principles and concepts underlying a broad range of fundamental areas of physics and to Connect their knowledge of physics to everyday situations.

CO 2: Understand the different sources of renewable energy and their generation processes and advances in nanomaterials and their properties, with a focus on quantum dots. To study the emerging field of quantum communication and its potential applications. To gain an understanding of the principles of biophysics in studying biological systems. Explore the properties and applications of shape memory materials.

Program	Semester	Course Code	Course Name
B.Sc.	II		WAVES AND OSCILLATIONS

On successful completion of this course, the student will be able to:
CO 1: To describe the basic characteristics of waves such as frequency, wavelength, amplitude, period, and speed.
CO 2: To utilize mathematical relationships related to wave characteristics.
CO 3: To compare particle motion and wave motion in different types of waves.
CO 4: To distinguish between Longitudinal and Transverse waves.
CO 5: To get the knowledge about how to construct and analysis the square waves, saw tooth waves, etc. from Fourier analysis

Program	Semester	Course Code	Course Name
B.Sc.	II		MECHANICS AND PROPERTIES OF MATTER

After successful completion of the course, students will be able to:
CO 1: Mastery of experimental techniques: Students should become proficient in using laboratory equipment and experimental techniques to measure properties of matter and analyze mechanical systems.
CO 2: Application of theory to practice: Students should be able to apply theoretical concepts learned in lectures to real-world situations, and understand the limitations of theoretical models.
CO 3: Accurate recording and analysis of data: Students should be able to accurately record and analyze experimental data, including understanding the significance of error analysis and statistical methods.
CO 4: Critical thinking and problem solving: Students should be able to identify sources of error, troubleshoot experimental problems, and develop critical thinking skills in experimental design and analysis.
CO 5: Understanding of physical principles: Students should develop an understanding of the physical principles governing mechanical systems and the properties of matter, including elasticity, viscosity, and thermal expansion

Program	Semester	Course Code	Course Name
B.Sc.	III	PHY233TH	THERMODYNAMICS

On successful completion of this course, the student will be able to: CO 1:Understand the basic aspects of kinetic theory of gasses, Maxwell-Boltzman distribution law, equipartition of energies, mean free path of molecular collisions and the transport phenomenon in ideal gasses CO 2: Gain knowledge on the basic concepts of thermodynamics, the first and the second law of thermodynamics, the basic principles of refrigeration, the concept of entropy ,the thermodynamic potentials and their physical interpretations. CO 3: Understand the working of Carnot's ideal heat engine, Carnot cycle and its efficiency CO 4: Develop critical understanding of the concept of Thermodynamic potentials, the formulation of Maxwell's equations and its applications. CO 5: Differentiate between principles and methods to produce low temperature and liquefy air and also understand the practical applications of substances at low temperatures. CO 6: Examine the nature of black body radiations and the basic theories.

Program	Semester	Course Code	Course Name
B.Sc.	IV	PHY244EME	ELECTRICITY MAGNETISM & ELECTRONICS
On successful completion of this course, the students will be able to: CO 1: Apply knowledge of electricity and magnetism to explain natural physical processes and related technological advances. CO 2: Use an understanding of calculus along with physical principles to effectively solve problems encountered in everyday life, further study in science, and in the professional world. CO 3: Design experiments and acquire data in order to explore physical principles, effectively communicate results, and critically evaluate related scientific studies. CO 4: Assess the contributions of physics to our evolving understanding of global change and sustainability while placing the development of physics in its historical and cultural context. CO 5: Understand electric and magnetic fields in matter CO 6: Apply Maxwell's equations to various physical problems CO 7: Calculate EM wave propagation			

Program	Semester	Course Code	Course Name
B.Sc.	V	PHY356EE	APPLICATIONS OF ELECTRICITY & ELECTRONICS
On completion of this course, the students will be able to: CO 1: Define, state and explain various Electronic components, batteries, AC & DC generators, Modulations techniques, Transformers etc			

CO 2: Understand the concepts needed to explain charging and discharging of capacitors understand the applications of thermodynamics in other disciplines like materials science and chemistry.
CO 3: Apply the laws of thermodynamics to real physical systems and processes, isothermal and adiabatic processes to heat engines, Maxwell's relations to latent and specific heat calculations and adiabatic demagnetization technique for cooling expressions.
CO 4: Integrate and apply a wide range of mathematical techniques to derive various thermodynamic laws and principles and for analyzing and solving problems in thermal physics.
CO 5: Analyze radiation phenomena in thermodynamic systems, radiation principles in designing pyrometers, Carnot's cycle in designing automobile engines, transport phenomena in process industries with reference to fluids and fluid mixtures.
CO 6: Design, set up, and carry out experiments; analyze data, compare with theoretical predictions and understand the orders of magnitudes of various quantities.

Program	Semester	Course Code	Course Name
B.Sc.	V	PHY35EI	ELECTRONIC INSTRUMENTATION

On completion of this course, the students will be able to:
CO 1: Students will be able to understand the fundamental concepts of measurements, differentiate between analog and digital instruments, and analyze sources of errors in measurements. They will also gain proficiency in using analog and digital multimeters, comprehend their specifications, and identify the significance of instrument accuracy and sensitivity in practical applications.
CO 2: Upon completion of this unit, students will acquire a comprehensive understanding of cathode ray oscilloscopes, including their principles, functioning, and various controls. They will be capable of utilizing oscilloscopes to measure DC and AC voltages, frequencies, and time periods. Additionally, students will gain knowledge about different types of oscilloscopes and their specific applications, including digital storage oscilloscopes.
CO 3: After completing this unit, students will be skilled in designing and analyzing A/D and D/A converters, specifically understanding binary ladder and successive approximation types. They will also comprehend the principles of operation for display devices, including LED displays, seven-segment displays
CO 4: Students will have a deep understanding of amplifier classification, including RC-coupled amplifiers and their frequency response characteristics. They will be proficient in analyzing feedback in electronic circuits, understanding positive and negative feedback, gains expressions, and the advantages of negative feedback. Additionally, students will comprehend the basic operating principles and applications of biomedical instruments such as ECG machines, radiography, ultrasound scanning, ventilators, and pulse oximeters.

DEPARTMENT OF BOTANY

PROGRAM	SEMESTER	CODE	COURSE
B. Sc., - BZC	I		INTRODUCTION TO CLASSICAL BIOLOGY

On completion of this course, the students will be able to:
CO 1: Learn the principles of classification and preservation of biodiversity

PROGRAM	SEMESTER	CODE	COURSE
B. Sc., - BZC	II		Non-Vascular Plants (Algae, Fungi, Lichens and Bryophytes)

On completion of this course, the students will be able to:
CO 1: Compile the general characteristics of algae and their significance in nature.
CO 2: Compare and contrast the characteristics of different groups of algae.
CO 3: Summarise the important features of fungi and their economic value.
CO 4: Distinguish the characteristics of different groups of fungi.
CO 5: Elaborate the features and significance of amphibians of plant kingdom
CO 6: Explain the diversity among non-vascular plants.

PROGRAM	SEMESTER	CODE	COURSE
B. Sc., - BZC	II		Origin of Life and Diversity of Microbes

On completion of this course, the students will be able to:
CO 1: Illustrate diversity of viruses, multiplication and economic value.
CO 2: Discuss the general characteristics, classification and economic importance of special groups of bacteria.
CO 3: Explain the structure, nutrition, reproduction and significance of eubacteria.
CO 4: Evaluate the interactions among soil microbes.
CO 5: Compile the value and applications of microbes in agriculture.

PROGRAM	SEMESTER	CODE	COURSE
B. Sc., - BZC	III	BOT233AEAP	Anatomy, Embryology of Angiosperms, Ecology and Biodiversity

On completion of this course, the students will be able to:
CO 1: Understand the general characters and classification of Bryophytes and realize the structure of representative examples. Understand the evolutionary process of Sporophyte in Bryophytes..
CO 2: Understand the general characters and classification of Pteridophytes and realize the structure of representative examples

CO 3: Understand the general characters and classification of Gymnosperms and realize the structure of representative examples.
CO 4: To gain knowledge of Plant cells, tissues and their functions.
CO 5: Understand the Process of Normal secondary growth and Anomalous secondary growth and realize the structure of representative examples. To gain knowledge of locally available timber plants and their economic importance

PROGRAM	SEMESTER	CODE	COURSE
B. Sc., - BZC	IV	BOT244PPM	Plant Physiology & Metabolism

On completion of this course, the students will be able to:
CO 1: Understand the importance of water, Understand the physical properties of water Gain knowledge on transpiration, ascent of sap etc.
CO 2: Understand the importance of ions, ionic absorption, Understand the role of nutrients and symptoms, Understand the nitrogen fixation mechanism
CO 3: Understand and explore about the structure and functions of Chloroplast and Understand carbon fixation mechanisms Understand the path of organic solutes
CO 4: Understand the importance of respiration and its types,
Understand the aerobic and anaerobic methods - glycolysis, Krebs cycle and EMP Path ways ,Understand the lipid mechanism
CO 5: Understand the plant growth and its parameters, Understand the types and role of phytohormones and physiology of flowering Understand the ageing and senescence mechanism

PROGRAM	SEMESTER	CODE	COURSE
B. Sc., - BZC	V	BOT356TC	TISSUE CULTURE

On completion of this course, the students will be able to:
CO 1: Comprehend the basic knowledge and applications of plant tissue culture.
CO 2: Identify various facilities required to set up a plant tissue culture laboratory.
CO 3: Acquire critical knowledge on sterilization techniques related to plant tissue culture.
CO 4: Demonstrate skills of callus culture through hands-on experience.
CO 5: Understand the biotransformation technique for production of secondary metabolites.

PROGRAM	SEMESTER	CODE	COURSE
B. Sc., - BZC	V	BOT357MC	MUSHROOM CULTIVATION

On completion of this course, the students will be able to:
CO 1: Understand the structure and life of a mushroom and discriminate edible
CO 2: Identify the basic infrastructure to establish a mushroom culture unit.
CO 3: Demonstrate skills in preparation of compost and spawn.
CO 4: Acquire critical knowledge on cultivation of some edible mushrooms.
CO 5: Explain the methods of storage, preparation of value-added products and marketing different types of casing mixtures, commonly used materials.

DEPARTMENT OF COMMERCE

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.Com	I		FUNDAMENTALS OF COMMERCE

On completion of this course, the students will be able to:
CO 1: Identify the role commerce in Economic Development and Societal Development. Equip with the knowledge of imports and exports and Balance of Payments.
CO 2: Develop the skill of accounting and accounting principles.
CO 3: They acquire knowledge on micro and micro economics and factors determine demand and supply.
CO 4: An idea of Indian Tax system and various taxes levied on in India.
CO 5: They will acquire skills on web design and digital marketing.

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.Com	I		BUSINESS ORGANIZATION

On completion of this course, the students will be able to:
CO 1: Ability to understand the concept of Business Organization along with the basic laws and norms of Business Organization.
CO 2: Understand different forms of business organizations.
CO 3: An idea of plant location of plant layout. They know the types of layouts and size of the business unit.

CO 4: They will acquire skills on Forms and kinds of business combinations.

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	II		FINANCIAL ACCOUNTING

At the end of the course student will:
Co 1: The student will be able to identify transactions and events that need to be recorded in the books of accounts. Equip with the knowledge of accounting process and preparation of final accounts of sole trader.
CO 2: Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP
CO 3: Know the difference between Joint Ventures and Consignment
CO 4: Critically examine the balance sheets of a sole trader for different accounting periods. Design new accounting formulas & principles for business organizations.
CO 5: They will acquire skills on different methods of depreciation.

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	II	COM122FA	OFFICE AUTOMATION TOOLS

On completion of this course, the students will be able to: CO 1: Use Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards CO 2: Create presentations and insert multimedia in them to acquire knowledge on the environment of GUI in MS-Word and its features. CO 3: Perform basic editing functions, formatting text, copy and moving objects and text. CO 4: Demonstrate the basic mechanics and navigation of an Excel spreadsheet CO 5: Analyze formatting techniques and presentation styles

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	II		PRINCIPLES OF MANAGEMENT
At the end of the course student will: CO 1: To outline the fundamental activities of managers. To explain the basic concepts, principles and theories of management. To examine the broad functions of management. CO 2: To propose initiatives to address the contemporary issues and challenges in the field of management CO 3: They will acquire skills on planning and levels of planning in organization. CO 4: Develop the skills on Types of Organizations and Authority, Responsibility and Accountability. They will know about the importance of staffing and directing. CO 5: To understand various controlling techniques practiced at organizations			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	II		FINANCIAL SERVICES
At the end of the course student will: CO 1: Understand the world of financial services and to facilitate the understanding of the various Financial Services CO 2: The course covers Merchant banking services, Venture Capital, Securitization, Demat services CO 3: understand other financial services like factoring and forfeiting procedural aspects. CO 4: acquire skills on credit rating agencies of CRISIL and CARE CO 5: Develop the skills on credit rating, leasing and Hire purchases.			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	III		ADVANCED ACCOUNTING
At the end of the course student will: CO 1: understand the concept of non-profit organizations and its accounting process CO 2: comprehend the concept of single-entry system and preparation of statement of affairs CO 3: familiarize with the legal formalities at the time of dissolution of firm CO 4: Prepare financial statements for partnership on dissolution of the firm CO 5: Employ critical thinking skills to understand the difference between dissolution of the firm and dissolution of partnership			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	III		BUSINESS STATISTICS
At the end of the course student will: CO 1: Understand the importance of Statistics in real life, CO 2: Formulate complete, concise, and correct mathematical proofs CO 3: Frame problems using multiple mathematical and statistical tools, CO 4: measuring relationships by using standard techniques Build and assess data-based models, CO 5: Learn and apply the statistical tools in day life and create quantitative models to solve real world problems in appropriate contexts.			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	III		MARKETING
At the end of the course student will: CO 1: To introduce the marketing concept and how we identify, understand and satisfy the needs of customers and markets CO 2: To describe major bases for segmenting consumer and business markets, define and able to apply the three steps of target marketing, market segmentation and market positioning CO 3: Students will demonstrate strong conceptual knowledge in the functional area of marketing management. CO 4: Enables students to pursue good marketing courses in future CO 5: Familiar about the product life cycle stages and new product development process, so through this they will be develop entrepreneur skills			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	III		PROGRAMMING WITH C AND C++
At the end of the course student will: CO 1: To understand History of 'C' - Structure of C program – C character set, Tokens, Constants, Variables, Keywords, Identifiers – C data types - C operators - Standard I/O CO 2: To understand the knowledge of Use of While, Do While and For Loops - Use of Break and Continue Statements - Array CO 3To develop the skills The Building Blocks of Declaration and Initialization of String Variables - String Handling Functions -Defining Functions - Function Call - Call By Value, Call By Reference – Recursion. CO 4: Enables students to understand Introduction to OOP and its basic features - C++ program structure - Classes and objects - Friend Functions-Constructor – Types of constructors – Destructor CO 5: understand Structure of Inheritance - Types of Inheritance -Types of derivation- Public – Private – Protected Hierarchical Inheritance			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	III		INSURANCE PROMOTION
At the end of the course student will: CO 1: Understand the field level structure and functioning of insurance sector and its role in protecting the risks CO 2: Comprehend pertaining skills and their application for promoting insurance coverage CO 3: Prepare better for the Insurance Agent examination conducted by IRDA CO 4: Plan 'promoting insurance coverage practice' as one of the career options.			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	IV		CORPORATE ACCOUNTING
At the end of the course student will: CO 1: Recognizing different types of shares, identifying the steps for formation of a company Aware of the process of valuation of shares CO 2: Preparation of accounts related to issue of shares and debentures CO 3: Preparation of accounts related to valuation of goodwill and valuation of shares CO 4: Preparation of accounts related to company final accounts CO 5: Identifying the Provisions of the Companies Act, 2013 relating to issues of shares and debentures			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	IV		COST AND MANAGEMENT ACCOUNTING
At the end of the course student will: CO 1: Basic concepts and enables the student to understand the basics of Cost accounting it's features and, objectives and techniques used to compute the Cost of different areas of business CO 2: On materials, deals with the valuation of material purchased by business entities and talks about the best means of purchasing large volume of cheaper rates CO 3: Marginal costing deals with cost volume profit analysis and the activity level at which the company earns neither profit nor loss. CO 4: Job costing and Batch costing is useful for students to evaluate the job cost per unit and Batch costing is evaluate lot of units in the same product. CO 5: Financial statement analysis evaluates the various statements like profit and loss account and balance sheet			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	IV		INCOME TAX

At the end of the course student will: CO 1: Describe the concepts and features of assessment of profits and gains of individual proprietorship, Doctor, Advocate and Chartered Accountant as individual assesses. CO 2: Assess short term and long-term capital gains of an Individual assesses who is involved in Business and Profession CO 3: Assess taxable income from other sources of an Individual assessee after taking into account deduction u/s 57 and amounts disallowed u/s 58. CO 4: Evaluate gross total income of an Individual assessee after taking into account deduction u/s 80. CO 5: Compute total taxable income and tax liability of an Individual assessee who is involved in Business and Profession.

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	IV		BUSINESS LAWS
At the end of the course student will: CO 1: Essential elements of valid contract, valid, void and voidable contracts, Indian Contract, Act 1872 CO 2: Offer (unilateral contract, Revocation of offer), Acceptance and Consideration. CO 3: Minor contracts, Different modes of discharge of contracts, Rules relating to remedies to breach of contract CO 4: Contract of sale, Rights of unpaid vendor. CO 5: Cyber Crimes, Digital signature, Electronic governance.			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	IV		DBMS
At the end of the course student will: CO 1: Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management System CO 2: understand the knowledge of File-Based System. Drawbacks of File-Based System, DBMS Approach, Advantage of DBMS CO 3: Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, Aggregation and Composition, CODD's Rules, Relational Data Model CO 4: Definition Language (DDL), Selection Operation Projection Operation, Aggregate Functions, Data Manipulation Language, Table Modification, Table Truncation, Imposition of Constraints, Set Operations. CO 5: understand Structure of PL/SQL, PL/SQL Language Elements, Data Types, Control Structure, Steps to Create a PL/SQL Program, Iterative Control Cursors, Steps to Create a Cursor, Procedure, Functions, Packages, Exceptions Handling, Database Triggers, Types of triggers			

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	IV		JAVA

At the end of the course student will:
CO 1: Develop programming skills and declaration of variables and constants use of operators and expressions
CO 2: Learn the syntax and semantics of programming language and be familiar with object-oriented concepts
CO 3: Analyse difference between Procedure– Oriented Programming and Object-Oriented Programming
CO 4: Packages, Different Types of Packages, Creating Package and Accessing a Package Streams, creating a File using File Input- Output Streams
CO 5: Exception Handling, Types of Exceptions, creating a Thread using Thread class methods.

PROGRAM	SEMESTER	COURSE CODE	COURSE NAME
B.com	V	COM356ACA	ADVANCED CORPORATE ACCOUNTING

At the end of the course student will:
CO 1: Prepare the Consolidated Balance Sheet of Holding and its Subsidiary Company and able to understand the legal requirements relating to presentation of Accounts of Holding Companies and its Subsidiaries
CO 2: Understand the meaning of Liquidation-Modes of Winding Up-Order of Payment-Preferential Creditors-Statement of Affairs- Deficiency or Surplus Account-Liquidator's Final Statement
CO 3: Understand the meaning of Amalgamation-Types of Amalgamation-Computation of Purchase Consideration-pass the Entries in the books of Transferor and transferee-special Adjustment Entries for Inter-Company Owings and Holdings
CO 4 Understand the meaning of Alteration of Share Capital and Reduction of Share Capital-Pass Accounting Entries-adjust Surrender of Shares-Dissenting Shareholders-Reconstruction Schemes
CO 5 Understand the meaning and terms used in Leasing-Popularity of Leasing-Advantages and Disadvantages-Classification-Operating and Financial Lease-Accounting for Financial Lease-Books of Lessee and Lessor-Operating Lease-Accounting for Operating Lease-Books of the Lessee and lessor

Program	**Semester**	**Course Code**	**Course Name**
B. Com Computers	V	7A	Data Science using Python

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

CO 1 Understand basic concepts of data science
CO 2 Understand why python is a useful scripting language for developers.
CO 3 Use standard programming constructs like selection and repetition.
CO 4 Use aggregated data (list, tuple, and dictionary).
CO 5 Implement functions and modules.

Program	Semester	Course Code	Course Name
B.Com General	V		STOCK MARKET

At the end of the course student will:
CO 1: The basic trade-off between risk and return and how it applies to various types of financial instruments, stocks, bonds, futures, options
CO 2: Market efficiency and arbitrage. Are markets efficient or are they dominated by irrational investors
CO 3: Diversification: how to select a portfolio of securities that maximizes returns, while minimizing risk? How does diversification work in practice?
CO 4: Financial instruments: bonds, stocks, currencies, and derivatives (futures options). How are these related to Hedging and speculation?
CO 5: The money management industry and its key players: Mutual funds and pension funds. Do they have any superior investment skills

Program	Semester	Course Code	Course Name
B.Com General, Computers	V		General insurance procedure and practice

On completion of this course, the students will be able to:
CO 1 Students apprehend the various products and their significance of General Insurance
CO 2 Students realize the statutory requirements and procedure to be followed while filling the various General Insurance policy forms and documents
CO 3 Students know the prospects of Indian and International General Insurance Market
CO 4 Students will understand the role of underwriters & Actuaries in fixing the premiums by Risk Sharing and Risk Management techniques
CO 5 Students understand the process and documents necessary for different types of claims.
CO 6 Students also learn about the frauds, fraud prevention and different types of reserves of Insurance Companies

Program	Semester	Course Code	Course Name
B.Com General	V		ADVERTISING AND MEDIA PLANNING

On completion of this course, the students will be able to:
CO 1 Determine, analyse, and respond to clients' advertising and marketing communications objectives by applying principles of marketing and communications
CO 2 Perform a market segmentation analysis, determine the organization's target market/audience, and define the consumer behaviour of each segment.
CO 3 Evaluate the effectiveness of integrated advertising and marketing communications initiatives.
CO 4 Evaluate the effectiveness of integrated advertising and marketing communications initiatives.
CO 5 Develop advertising and marketing communications material in compliance with current Canadian legislation, industry standards and business practices

Program	Semester	Course Code	Course Name
B. Com General & Computers	V	COM355LIP	Life insurance with Practice.

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

CO-1 Understand the features of Life insurance, schemes and policies and insurance companies in India.

CO-2 Analyze various schemes and policies related to the life insurance sector.

CO-3 Choose a suitable insurance policy for a given situation and respective persons.

CO-4 Acquire insurance agency skills and other administrative skills.

CO-5 Acquire skill of settlement of claims under various circumstances.

Program	Semester	Course Code	Course Name
B.Com General	V		GST WITH TALLY

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

CO 1 To introduce the students to Basic of Accounts and the usage of Tally for accounting purpose and basic concepts of GST

CO 2 Students will learn to create company, enter accounting voucher entries including advance voucher entries, do reconcile bank statement, do accrual adjustments, and also print financial statements, etc. in Tally ERP.9 software.

CO 3 Demonstrate an understanding of various predefined inventory vouchers to suit the various business requirements and flexibility to create unlimited stock items, use simple to complex conversion units and generate invoices with the required information and dimensions.

CO 4 Demonstrate an understanding of how to maintain a payroll register. This helps to understand how to maintain management related information, statutory forms, and reports in the prescribed formats such as: Pay Slip, Payroll Statements, Attendance and Overtime Registers et

CO 5 Develop the students use the Tally software, that helps to prepare Accounting, Payroll, Billing, Sales and Profit Analysis, Auditing Banking Inventory, Taxation such as GST

CO 6 Synthesize company accounts into Tally software Evaluate GST in the accounting software. Create a career as accounting professional.

Program	Semester	Course Code	Course Name
B. Com General & Computers	V	COM357SMA	Stock Market Analysis

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

CO-1: Understand overall share market.

CO-2: To identify the trends, support, and resistance in the stock market.

CO-3: Understand how to build portfolio and investment decision in appropriate manner

CO-4: Understand fundamental, technical, and quantitative analysis of stock.

CO 5: To identify bullish and bearish patterns of securities in stock markets.

Program	Semester	Course Code	Course Name
B. Com General	V	COM351ITAPP	Income tax procedure and practice
On completion of this course, the students will able to:- CO 1: Understand the application of taxation knowledge in both theoretical and practical. CO 2: Determine the procedure and schedule to be followed on preparing financial statements of companies CO 3: File income tax return and compute tax liability of individuals. CO 4: Develop critical thinking skills in students CO 5: Understand E-Filling of tax returns and tax procedures			

Program	Semester	Course Code	Course Name
B.Com General	V		SALES PROMOTION AND PRACTICE
On completion of this course, the students will be able to: CO 1: Understanding of basic concepts of sales promotion and to develop the skills to manage sales operations in a business firm. CO 2: Discuss and make the student understand complexities of sales promotions involved in various organizations CO 3: Take effective decisions for launching a new sales promotion technique in organization CO 4: Understand the implications of the different promotional techniques and personal selling strategies CO 5: To develop the skills among the students to enable them to design the personal selling strategies and make them aware of the selling strategies in the current era.			

Program	Semester	Course Code	Course Name
B.Com Computer Applications	V	COM-351 BDAR	Big Data Analytics using 'R'
On Completion of this Course, The students will able to:- CO 1: Understand data and classification of digital data. CO 2: Understand Big Data Analytics. CO 3: What is R? Why R? advantages of R over other programming languages, Data types in R CO 4: Data frames in R, Operations performed on data Frames. Load data into R. CO 5: Reading and getting data into R (External Data), Working with R Charts and Graphs.			

DEPARTMENT OF VISUAL COMMUNICATION AND E-MEDIA

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	I		Introduction to Communication Theories
On Completion of this Course, The students will able to CO 1: Understand the role of communication in personal & professional success. CO 2: Develop awareness of appropriate communication strategies. CO 3: Prepare and present messages with specific intent. CO 4: Analyse a variety of communication acts. CO 5: Ethically use, document and integrate sources			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	I		VISUAL COMMUNICATION
On Completion of this Course, The students will able to CO 1: Students will learn how the light works with the camera. Students will learn how the colour theory works. 2. Students will be able to analyse a visual message from six different perspectives Personal, Historical, Technical, Ethical, Cultural and Critical. 3. Students will be able to create Ideas for Visual ads, TV ads etc. 4. Students will be able to work in industries like Graphic Designing, Television, Film etc.			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Digital Still Photography
On Completion of this Course, The students will able to CO 1: understanding of the technical aspects of digital photography, including camera settings, exposure, focus, and white balance. 2. learn the principles of composition and design in photography, including concepts like rule of thirds, leading lines, framing, and balance. 3. Learning how to manage and organize digital image files, as well as establishing an efficient workflow for post-processing. 4. Understanding copyright and privacy issues related to photography and respecting the rights of individuals and properties when taking phot			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Digital Audio Production & Video Editing

On Completion of this Course, The students will able to

CO 1: Understand the fundamentals of digital audio production and video editing.

CO 2: Demonstrate proficiency in using industry-standard software for audio and video editing.

CO 3: Create and edit digital audio content for various applications.

CO 4: Produce and edit video content for diverse purposes.

CO 5: Apply creative and technical skills to produce high-quality audio and video projects.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Visual Literacy

On Completion of this Course, The students will able to

CO 1: Define visual problems and communicate solutions related to relevant concepts, focuses, contexts and media.

CO 2: Create and communicate meanings through the use of visual language and expression.

CO 3: Research, develop, resolve and reflect to demonstrate a personal aesthetic (style/expression) application in the use of materials, techniques, technologies and art processes to construct and communicate meaning. Students manipulate and exploit materials, techniques, technologies and art processes to articulate their ideas, feelings and experiences challenging accepted practice, experimenting with ways of creating and viewing meaning, and being innovative.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Media Laws & Ethics

On Completion of this Course, The students will able to

CO 1: The students will learn the Indian constitution and the four estates of Indian democracy

CO 2: Learn about the defamation and its implication

CO 3: Learn about the laws and acts relating to the press and media

CO 4: Study the Moral aspects of the Laws

CO 5: Study the ethical aspects of the Laws

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Introduction to Journalism

On Completion of this Course, The students will able to

CO 1: Be familiar with various media industries and their issues;

CO 2: Have an initial exposure to major theoretical approaches to understanding the media;

CO 3: Have an initial exposure to the important turning points of American media history;

CO 4: Understand the major factors that shape news coverage;

CO 5: Be familiar with the major criticisms of media industries and their products.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Digital Still Photography

On Completion of this Course, The students will able to

CO 1: An understanding of the industrial and commercial applications of photographic technique

CO 2: Functional knowledge of photographic history and theory, the relationship of photography to the visual disciplines, and its influence on culture.

CO 3: The ability to work in experimental and manipulative techniques, candid and contrived imagery, documentary photography, archival processing, and interpretive studies.

CO 4: The ability to work and study independently.

CO 5: A familiarity with and command of materials, equipment, and library resources related to the study of photography.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Digital Audio Production & Video Editing (P)

On Completion of this Course, The students will able to

CO 1: Learn how to combine basic design principles in video editing.

CO 2: Application of video software to edit and produce.

CO 3: Learn Adobe Premiere Pro & Final Cut Pro software in basic level.

CO 4: Able to learn techniques of handling the different types edit setup.

CO 5: Learn fundamental knowledge of how sound is digitally produced and recorded.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Visual Literacy (P)

On Completion of this Course, The students will able to

CO 1: Make sustained observation of visual images

CO 2: Interpret, analyse, and communicate the meanings of images and visual media

CO 3: Use images and visual media effectively

CO 4: Evaluate images and their sources

CO 5: Determine the nature and extent of the visual materials needed for a project

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Media Laws & Ethics (P)

On Completion of this Course, The students will able to

CO 1: Comprehend the legal and ethical principles governing media.

CO 2: Apply media ethics in practical situations.

CO 3: Evaluate media coverage of local, national, and global events.

CO 4: Analyze social problems and their root causes.

CO 5: Understand the role of media in shaping modern society.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Introduction to Journalism
On Completion of this Course, The students will able to CO 1: Understand and apply the basic principles of journalism in current news reporting. CO 2: Analyze and critically evaluate current topics of debate and construct well-informed news stories. CO 3: Write persuasive and informative editorials on relevant social and political issues. CO 4: Create comprehensive case studies that explore a specific aspect of journalism or a journalistic event. CO 5: Edit and format news content for accuracy, clarity, and readability.			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Public Speaking & Presentation (P)
On Completion of this Course, The students will able to CO 1: To make the student to present to a group, company and individual, learn to speak to the public CO 2: Smart way of presenting materials to the public, to understand the nuances of presentation CO 3: To gain confidence in whatever one presents to the other CO 4: Speak more confidently in front of an audience utilizing a variety of delivery skills such as eye contact, gestures, movement & vocal variety. CO 5: Develop Informative and Persuasive speeches through research, audience analysis			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Public Speaking & Presentation (P)
On Completion of this Course, The students will able to CO 1: To make the student to present to a group, company and individual, learn to speak to the public CO 2: Smart way of presenting materials to the public, to understand the nuances of present			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	II		Story Board (P)
On Completion of this Course, The students will able to CO 1: To understand the need for storyboarding. CO 2: To learn the fundamentals of shoot taking and division. CO 3: To understand various storyboarding techniques. CO 4: To understand the importance of perspective and lighting while storyboarding			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		NEWS WRITING AND REPORTING (T)
On Completion of this Course, The students will able to CO 1: Gain an overall understanding of the history of print media during the pre and post-independence eras. CO 2: Acquire knowledge about the growth of news agencies. CO 3: Gain an understanding of the emergence of different genres within the newspaper. CO 4: Acquire knowledge of the role of print media in developed countries. CO 5: Gain an understanding of trends in print media			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		TELEVISION PRODUCTION - 1 (T)
On Completion of this Course, The students will able to CO 1: Communicate effectively through film and television platforms CO 2: Conceptualize, write, shoot and edit documentary films independently CO 3: Develop characters and write dialogues for a film CO 4: Conceptualize, develop and write the screenplay for films CO 5: Develop and create a programme of different genres for television			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		MEDIA LAWS & ETHICS (T)
On Completion of this Course, The students will able to CO 1: The students will learn the Indian constitution and the four estates of Indian democracy CO 2: The students will learn about the defamation and its implications CO 3: The students will learn about the laws and acts relating to the press and media CO 4: The students will study the Moral aspects of the Laws CO 5: The students will study the ethical aspects of the Laws			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		MEDIA & CULTURE (T)

On Completion of this Course, The students will able to
CO 1: Students identify and develop an understanding of the basic concepts, from semiotics, Marxist media theories, representation, and institutions, to audience theories, media globalization and new media studies.
CO 2: Students formulate well-informed opinions and critical awareness of current news and media practices

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		PRINT JOURNALISM (P)

On Completion of this Course, The students will able to
CO 1: Students will acquire a functional knowledge of the underlying principles and recent emerging trends of the media industry.
CO 2: Students will develop communication skills, appreciation for creativity, critical thinking, and an analytical approach.
CO 3: Students will be equipped to conceptualize, create, design, and strategies high-quality media content for print, TV, radio, films and various digital platforms like social media, mobile
CO 4: Students will appreciate and demonstrate the ability to produce reliable outcomes firmly founded on the socially responsible framework, backed by decent knowledge of media ethics and law.
CO 5: Critically appraise practices and trends in print media

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		TELEVISION PRODUCTION - 1 (P)

On Completion of this Course, The students will able to
CO 1: Operate the basic functions of a video camera.
CO 2: Execute basic camera shots using appropriate composition methods.
CO 3: Create clean and usable video footage while applying basic camera techniques.
CO 4: Utilize Adobe Premiere at a basic level to edit video footage.
CO 5: Enterprise story ideas to create video packages.
CO 6: Apply the production planning process of storyboards, content outline, storytelling and execution.
CO 7: Practice basic audio and lighting techniques.
CO 8: Import and export video content in the correct format to use on different media outlets

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		BROADCAST JOURNALISM (P)

On Completion of this Course, The students will able to
CO 1: Understand radio as a medium its role and functions in the convergent media epoch
CO 2: Acquire skills in writing scripts for various radio programs
CO 3: Learn to take up various roles in radio
CO 4: Handle production equipment- software and hardware needed for radio production
CO 5: Able to produce indoor and outdoor programs

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		PRINCIPLES OF DESIGNING (P)

On Completion of this Course, The students will able to
CO 1: To gain control of representational drawing skills and To understand and manipulate proportional relationships from actual objects.
CO 2: To manipulate the formal elements and principles to achieve better design solutions. To understand the importance and control of good craftsmanship and presentation skills.
CO 3: To gain a basic understanding of the concepts of drawing and a working knowledge of the media and techniques basic to drawing. To develop the vocabulary necessary for critical analysis of drawing as visual art.
CO 4: Students gain knowledge of the concepts of art and design including the visual arts. Students identify principles of design in a range of visual disciplines. Students discuss works of art and design using the vocabulary of the discipline (in terms of aesthetics and the appropriate technology).

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		EVENT MANAGEMENT (P)

On Completion of this Course, The students will able to
CO 1: Communication-Written communications (preparation official & semi-official) orders
CO 2: Concept-based Exhibition.
CO 3: Event planning & developing a mission
CO 4: Image & Branding Preparing event proposal
CO 5: Dress codes, staging & staffing.
CO 6: Event Production & Logistics-Concept & theme
CO 7: light, sound & handling Venders.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	III		CONTEMPORARY ISSUES & NEWS ANALYSIS (P)

On Completion of this Course, The students will able to

CO 1: Describe the primary theoretical perspectives used by sociologists in approaching social problems.

CO 2: Apply a range of theoretical perspectives to interpret social problems associated with gender, race and ethnicity.

CO 3: Identify the major social problems evident in contemporary Indian society, including both micro problems involving interpersonal relations as well as macro problems involving structural factors and change.

CO 4: Critically evaluate social problems in terms of the organization and structure of contemporary Indian society.

CO 5: Evaluate the role of the state/government in addressing social problems

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Advertising (T)

On Completion of this Course, The students will able to

CO 1: Understand the concept of Integrated Marketing Communication.

CO 2: Understand the concept of advertising.

CO 3: Discuss the basic economic impact of advertising.

CO 4: Explain the different job functions and responsibilities of those employed in advertising.

CO 5: Recognize some of the social and ethical implications of advertising.

CO 6: Recognize some of the forms of advertising regulation.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Television Production - 2 (T)

On Completion of this Course, The students will able to

CO 1: Apply industry standard processes for development, pre-production, production, post-

CO 2: Production, marketing, and distribution of media content for film and television.

CO 3: Relate historical and current issues and emerging trends to the evolution of film and television as an artistic media.

CO 3: Model professional and ethical behaviour when solving problems working with colleagues and Clients in the media industry to achieve production project goals.

CO 4: Develop scripts for film, television productions and web-based projects.

CO 5: Produce visual and audio effects to refine and enhance media productions.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Public Relations & Corporate Communication (T)

On Completion of this Course, The students will able to

CO 1: Analyze and evaluate real-world public relations and corporate communication campaigns to identify their strengths and weaknesses.

CO 2: Create and execute effective communication strategies and campaigns that align with organizational goals and objectives.

CO 3: Comprehend the importance of corporate communication in maintaining and enhancing an organization's reputation and credibility.

CO 4: Explore the relationship between corporate social responsibility and its impact on an organization's public image and stakeholder relationships.

CO 5: Evaluate the strategies and tactics employed in corporate identity management to establish a consistent and positive brand image.

CO 6: Enhance communication and writing skills for creating effective press releases, media kits, and other PR materials.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Management of Electronic Media (T)

On Completion of this Course, The students will able to

CO 1: Train the students to meet the requirements of the electronic media organizations and Society.

CO 2: To train the students with special focus on cinema, Radio and Television programme Productions

CO 3: To educate the students in the areas of research, media management, advertising and corporate communication.

CO 4: To enlighten students to be aware of the media impact on culture and society, ethical and legal aspects of the media profession.

CO 5: To train the students in multimedia and emerging communication technologies.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Advertising (P)

On Completion of this Course, The students will able to

CO 1: Be informed of, both practically and conceptually, in the field of public relations, advertising, brand communication.

CO 2: Have the ability to explain and identify problems associated with area.

CO 3: Plan and manage events as a member of a team and individually for the professional development in the areas of public relations, advertising, brand communication, marketing communication, persuasive communication, communication management, and corporate communications.

CO 4: Critically evaluate their own knowledge and skills in the areas.

CO 5: Use advanced level of conceptual and practical information in the areas

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Television Production - 2 (P)

On Completion of this Course, The students will able to
CO 1: Apply a professional level of preparation and planning for multi-cam production.
CO 2: Apply the principles of effective production techniques of a multi-Cam production.
CO 3: Apply industry-standard camera preparation tasks, evaluate image formats and articulate production solutions.
CO 4: Develop a directorial treatment, and visual design preparation that will assist the production process of the project.
CO 5: Evaluate the impact of large-scale production on social and environmental contexts.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Social media & Online Journalism (P)

On Completion of this Course, The students will able to
CO 1: Understand the concept of new media and its characteristics,
CO 2: Understand and explain its roles and functions
CO 3: Determine the use of social media as tool for effective communication
CO 4: Identify its role and use it effectively for personal development and social cause
CO 5: Connect it for effective media work

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	IV		Anchoring (P)

On Completion of this Course, The students will able to
CO 1: Presenting Tips & Techniques
CO 2: Teleprompter Training
CO 3: Vocal Delivery
CO 4: Approach to the Perfect Presentation
CO 5: Interview/Screen-test Technique

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		DEVELOPMENT COMMUNICATION (T)

On Completion of this Course, The students will able to
CO 1: Concepts of development and critical analysis of the underdevelopment
CO 2: About western paradigms for development
CO 3: About some folk arts, street theatre in development
CO 4: Develop analytical skills to appreciate some feature films on social empower
CO 5: Learn social advertising skills.

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		DIGITAL MEDIA STUDIES

On Completion of this Course, The students will able to
CO 1: The history of media and communication leading up to the era of Digital Media and its trends.
CO 2: Acquiring knowledge about the key technologies underpinning the hardware, software, and networks that comprise essential digital media forms.
CO 3: Analyze current events, companies, and trends in digital media from various perspectives.
CO 4: To develop content using the features in New Media

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		NTERACTIVE COMMUNICATION DESIGNING (T)

On Completion of this Course, The students will able to
CO 1: Understand the history of interaction design and explore current trends in user experience design.
CO 2: Learn the basic physiological, perceptual, and cognitive components of human learning and memory.
CO 3: Understand visualization and the design process and implementing design principles.
CO 4: Make visual design artworks informed by their understanding of practice, the conceptual framework, and the frames.
CO 5: To gain theoretical knowledge of and practical experience in the fundamental aspects of designing and implementing user interfaces

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		MEDIA RESEARCH METHODOLOGY (T)

On Completion of this Course, The students will able to
CO 1: Learn the ropes of social science research
CO 2: Do research on their own and come up with some interesting data and analyse the data too to add to the domain of media research.
CO 3: Learn to employ relevant research methods for the topics of research chosen by them.
CO 4: Employ research methodology in production and technological practices and relevant social issues.
CO 5: Understand the nature of mediated and non-mediated messages

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		DOCUMENTARY FILM MAKING (P)
On Completion of this Course, The students will able to CO 1: Learn and prepare to produce a documentary. CO 2: Learn and prepare to go into the field to shoot a documentary. CO 3: Understand documentary production in its social and historical context. CO 4: Learn how post-production of a documentary works.			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		UX & UI DESIGNING(P)
On Completion of this Course, The students will able to CO 1: Acquire knowledge about User Experience Design CO 2: Strengthen the knowledge of concepts, models and theories of UX & UI Design CO 3: Develop web or mobile application			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		DISSERTATION (P)
On Completion of this Course, The students will able to The dissertation intends to demonstrate students' intellectual ability to apply theories of communication, development communication, and mass communication learnt during the program. The dissertation intends to review the intellectual comprehension and interiorize theory with reference to the area of specialization and suitability for the industry. A panel of 3 experts drawn from the faculty and the dissertation guide will assess the student's ability to utilize the repertoire of knowledge of mass communication and journalism in a professional media context.			

Program	Semester	Course Code	Course Name
B.Sc., Vis Comm & E-Media	V		Internship (P)
Assess interests and abilities in their field of study. Learn to appreciate work and its function in the economy. Develop work habits and attitudes necessary for job success. Develop communication, interpersonal and other critical skills in the job interview process. Build a record of work experience.			

DEPARTMENT OF BUSINESS ADMINISTRATION

Program	Semester	Course Code	Course Name
BBA	I		Fundamentals of Commerce

On Completion of this Course, The students will able to
CO 1: To acquire conceptual knowledge of the Commerce, Economy, and Role of Commerce in Economic Development.
CO 2: To analyse and measure national income, comprehend demand and supply, and understand market dynamics, including perfect competition and equilibrium prices.
CO 3: To gain proficiency in accounting principles, including the accounting cycle, financial accounting, cost accounting, and management accounting.
CO 4: To differentiate between types of taxes, grasp the objectives of taxation, and understand the roles of key tax authorities.
CO 5: To acquire practical skills in web design, digital marketing, and data analytics, including WordPress basics, social media marketing, and prediction of customer behaviour.

Program	Semester	Course Code	Course Name
BBA	I		Fundamentals of Commerce

On Completion of this Course, The students will able to
CO 1: To understand business fundamentals, classifications, and modern business characteristics.
CO 2: To gain knowledge about various types of business organization
CO3: To enlighten with different types of Plant Location and Layout
CO 4: To distinguish different types of Business Combinations
CO 5: To familiarize with essentials of computers

Program	Semester	Course Code	Course Name
BBA	I I		Principles of Management

On Completion of this Course, The students will able to
CO 1: To outline the fundamental activities of managers
CO 2: To explain the basic concepts, principles and theories of management
CO 3: To examine the broad functions of management
CO 4: To comprehend the contemporary issues and challenges in the field of management
CO 5: To understand various control techniques practised at organisations

Program	Semester	Course Code	Course Name
BBA	II		Business Economics

On Completion of this Course, The students will able to
CO 1: To understand the concept of economics and its relevance to business.
CO 2: To comprehend the concept of Demand analysis for making important business decisions
CO 3: Learn to apply the concepts of cost and Break-even analysis and learn various theories on production.

CO 4: Understand concepts of perfect competition and monopoly for fixation of prices.
CO 5: Understand the international business scenario and concepts of BOP.

Program	Semester	Course Code	Course Name
BBA	III		Business Research

On Completion of this Course, The students will able to
CO 1: Apply an advanced understanding of business research design options, methodologies and analysis methods (both qualitative and quantitative), including respective terms, definitions and applications to the design, implementation and evaluation of a research project.
CO 2: Distil an identified business problem into a succinct research problem (or problems) and articulate this into a comprehensive research brief for investigation by a research team locally or internationally.
CO 3: This brief will include a statement of the resulting research problem and the objectives that need to be achieved to provide the information necessary to tackle the business problem and the decisions that need to be made respective to it.
CO 4: Complete, from the brief created, a research proposal for implementation at either a local or international level.

Program	Semester	Course Code	Course Name
BBA	III		Financial Management

On Completion of this Course, The students will able to
CO 1: To understand the concept of business finance and financial management,
CO 2: To analyse the cost of capital, computation of cost of capital
CO 3: To distinguish factors determining capital structure, various theories
CO 4: To determine usefulness of capital budgeting meaning and importance and kinds of investment proposals, factors affecting capital investment decisions
CO 5: To design working capital meaning and need and factors determining the working capital

Program	Semester	Course Code	Course Name
BBA	III		Fundamentals of Marketing

On Completion of this Course, The students will able to
To understand the various core marketing concepts and their importance
CO 2: To understand different marketing trends, markets, products & channels
CO 3: To gain knowledge on buyer behaviour and market segmentation
CO 4: To familiarize students about product and its classifications
CO 5: To understand different price strategies & promotion strategies.
CO 6: To understand the importance of regulating marketing.

Program	Semester	Course Code	Course Name
BBA	III		Human Resource Management

On Completion of this Course, The students will able to
CO 1: acquaint the role and importance, various policies and practices of human resources management. (L1 & L 2)
CO 2: To impart the knowledge about concept of human resource planning, its objectives and process of human resource planning and also the job analysis. (L1 & L 2)
CO 3: To understand the concept of recruitment and selection and its process and principles of placement and overview about induction procedure. (L1 & L 2)
CO 4: To impart the knowledge about the performance appraisal, its various methods and the concept of training and executive development and an overview about evaluation of training and development programmes. (L2 & L 3)
CO 5: To make the student well acquainted with the concept of job evaluation process, compensation management, its approaches and an overview of designing a graded salary structure. (L2|& L 3)

Program	Semester	Course Code	Course Name
BBA	III		Organizational Behaviour

On Completion of this Course, The students will able to
CO 1: Discuss the development of the field of organizational behavior and explain the micro and macro approaches.
CO 2: Analyze and compare different models used to explain individual behavior related to motivation and rewards.
CO 3: Identify the processes used in developing communication and resolving conflicts.
CO 4: Explain group dynamics and demonstrate skills required for working in groups (team building).
CO 5: Explain organizational culture and describe its dimensions and to examine various organizational designs.
CO 6: Discuss the implementation of organizational change.

Program	Semester	Course Code	Course Name
BBA	III		Retailing

On Completion of this Course, The students will able to
CO 1: Know the retailing business, its growth in India and social impact
CO 2: Understand the and organization and supply in retailing
CO 3: Comprehend the opportunities and challenges in retailing
CO 4: Learn the functions that support outlet operations, sales and services
CO 5: Create a shopping experience model that builds customer loyalty and business promotion

Program	Semester	Course Code	Course Name
BBA	IV		Training and development

On Completion of this Course, The students will able to
CO 1: To develop an understanding of the evolution of training & development from a tactical to a strategic function.
CO 2: To provide an insight into what motivates adults to learn and the most appropriate methodologies to impart training
CO 3: To understand the concept of training audit & training evaluation
CO 4: To learn how design a training module and execute it
CO 5: To understand the need for and concept of Performance Management
CO 6: To understand various strategies used by organizations to measure performance & reward for the same

Program	Semester	Course Code	Course Name
BBA	IV		Micro, Small and Medium Enterprises Management

On Completion of this Course, The students will able to
CO 1: To create an awareness on various Entrepreneurship Development Programme
CO 2: To enable them to understand project formulation
CO 3: To familiarize the students with EDP schemes
CO 4: To give an introduction about MSME and Various measures for their development
CO 5: To create an awareness on various sources of finance

Program	Semester	Course Code	Course Name
BBA	IV		International Business

On Completion of this Course, The students will able to
CO 1: Learning by the students regarding Domestic and International/Foreign Trade.
CO 2: Determining Factors influencing exchange rate fluctuations and Euro market
CO 3: Analysis of Balance of payment: Contents, disequilibria in BOP, measures to bring back equilibrium in BOP
CO 4: Analysis of WTO and Trade blocks – WTO Foundation, advantages and Disadvantages of WTO Procedure and Documents:

Program	Semester	Course Code	Course Name
BBA	IV		Cost and management accounting

On Completion of this Course, The students will able to
CO 1: Determining of Financial statement Analysis
CO 2: Practical expose of Ratio Analysis: Meaning - Accounting Ratios - uses - limitations
CO 3: Problematic to the students Marginal Costing -cost classification- differences between marginal costing and absorption costing - marginal cost equation

Program	Semester	Course Code	Course Name
BBA	IV		Business Law

On Completion of this Course, The students will able to

CO 1: Understand the essentials of a valid contract and its kinds. Understand the essentials of offer and acceptance, consideration. Will know how a contract is discharged and when the breach of contract arises followed by its remedies.

CO 2: Make understand the impact of companies act and its kinds. This also helps students to know about the documents lie MOA & AOA in relation to incorporation of a company.

CO 3: Know the impact of factories act 1948 of how the health safety and welfare measures of the labourers are taken into consideration.

CO 4: Ensure about the concept of sale of goods act 1930 of understanding them the differences between sale and agreement to sell, conditions and warranties etc. Will also know when a seller was unpaid and the various rules of delivery.

CO 5: Know about the essential commodity act as well about the consumer protection act 1986 of how the consumers are protected with reference to various consumer councils .

Program	Semester	Course Code	Course Name
BBA	IV		Financial services

On Completion of this Course, The students will able to

CO 1: Understand the various services offered and various risks faced by banks

CO 2: Determine the need of financial system and describe how and why financial system works.

CO 3: Have a practical understanding of various financial institutions and their functioning

CO 4: Understand the dynamic changes of the banking industry and the policy responses because of the recent crisis

CO 5: Have a practical understanding of the various financial services both domestic and international wise.

CO 6: Be able to understand the management of mutual funds. Be provided with the knowledge of risk and rewards of investing in mutual funds.

CO 7: Understand money market, its different types and its functioning.

Program	Semester	Course Code	Course Name
BBA	IV		Personality Enhancement and Leadership

On Completion of this Course, The students will able to

CO 1: Develop comprehensive understanding of personality

CO 2: Know how to assess and enhance one's own personality

CO 3: Comprehend leadership qualities and their importance

CO 4: Understand how to develop leadership qualities

Program	Semester	Course Code	Course Name
BBA	V		Talent Management

On Completion of this Course, The students will able to
CO 1: To develop a clear understanding of Talents that are inculcated among the Employees in today's Business Environment.
CO 2: To measure the various strengths and weakness of the employees and establishing theories and practices.
CO 3: To Monitor the current trends in utilization of Employees team spirit and also in analysing their abilities and skills
CO 4: To bring out the learning and conceptual skills aiming the employees in order to reach the target.
CO 5: To analyse the 360 Degree Feedback from the existing staff and to implement the measures needed.

Program	Semester	Course Code	Course Name
BBA	V		Global Human Resource Management

On Completion of this Course, The students will able to
CO 1: To develop the understanding of the concept of human resource management and to understand its relevance in organizations.
CO 2: To develop necessary skill set for application of various HR issues.
CO 3: To analyse the strategic issues and strategies required to select and develop manpower resources.
CO 4: To integrate the knowledge of HR concepts to take correct business decisions.
CO 5: Integrated perspective on role of HRM in modern business. Ability to plan human resources and implement techniques of job design

Program	Semester	Course Code	Course Name
BBA	V		Export and Import

On Completion of this Course, The students will able to
CO 1: To Demonstrate understanding of export controls, intellectual property rights, and confidentiality in international trade.
CO 2: To apply knowledge of export sales, insurance, finance, and licensing to develop competitive export pricing strategies.
C0 3: Proficiently prepare export packaging, transportation methods, and documentation, optimizing benefits and duty drawbacks.
CO 4: Solve complex shipment issues, negotiate shipping documents, and formulate effective corporate marketing strategies for international trade.
CO 5: Exhibit competence in customs formalities, export/import documentation, and regulatory compliance in diverse import/export scenarios.

Program	Semester	Course Code	Course Name
BBA	V		Brand Management

On Completion of this Course, The students will able to

CO 1: To understand product management, corporate strategy, product life cycle and develop effective marketing strategies for products.

CO 2: Apply new product development techniques, include idea generation, concept testing, successful launch and tracking of new product programs.

CO 3: Demonstrate knowledge of brand management, crafting brand elements and building consumer brand associations.

CO 4: Effectively manage brand architecture and portfolios with insights into corporate branding tools for building brand equity.

CO 5: Learn to leverage and measure brand equity for strategic marketing decisions and brand development.

Program	Semester	Course Code	Course Name
BBA	V		Foreign Exchange Management

On Completion of this Course, The students will able to

CO-1: Assess factors impacting exchange rates, understanding economic indicators and forces, which have impact in foreign markets and global markets.

CO-2: Apply financial instruments for hedging, optimizing international transactions with derivatives, like swaps, options, futures.

CO-3: Navigate regulatory frameworks, ensuring compliance with legal and ethical considerations, which have impact in foreign markets and global markets

CO-4: Utilize quantitative techniques for assessing and managing foreign exchange exposure.

CO-5: Evaluate macroeconomic policies, formulating effective strategies for global financial environments that are helpful for traders in exchange markets.

Program	Semester	Course Code	Course Name
BBA	V		E-Payments

On Completion of this Course, The students will able to

CO1: Understand E-cash and Virtual Money Electronic Data interchange and about NEFT/RTGS/E Payment modes

CO2: Demonstrate knowledge of Automated Clearing and Settlement process and ATM networks, Fed wire etc

CO3: Identify and describe terms of Cryptography, Hash functions and Algorithm applications

CO4: Understand the different types of Mobile Payments, Wireless payments and different Wallets, Security Challenges in mobile payments

CO5: Develop the Electronic invoice and Payment systems its process, EIPP providers and elimination of paper, Scan based payments.

DEPARTMENT OF POLITICAL SCIENCE

Program	Semester	Course Code	Course Name
BA	I		Fundamentals of Social Sciences
On Completion of this Course, The students will able to CO 1: Learn about the nature and importance of social science. CO 2: Understand the Emergence of Culture and History CO 3: Know the psychological aspects of social beahaviour CO 4: Comprehend the nature of Polity and Economy CO 5: Knowledge on application of computer technology			

Program	Semester	Course Code	Course Name
BA	I		Perspectives on Indian Society
On Completion of this Course, The students will able to CO 1: Learn about the significance of human behaviour and social dynamics. CO 2: Remembers the Indian Heritage and freedom struggle CO 3: Comprehend the philosophical foundations of Indian Constitution CO 4: Knowledge on Indian Economy CO 5: Analyse the Role of Computer and its impact on Society			

Program	Semester	Course Code	Course Name
BA	II		Fundamentals of Political Science
On Completion of this Course, The students will able to CO 1: Learn nature, importance, and relationship with other social sciences. CO 2: Understand the traditional and modern approaches. CO 3: Know the origin and evolution of the state. CO 4: Comprehend the development of social contract theory. CO 5: Understand the birth of modern state.			

Program	Semester	Course Code	Course Name
BA	II		Concepts & Ideologies of Political Science
On Completion of this Course, The students will able to CO 1: Learn the concepts CO 2: Understand the law and liberty. CO 3: Know equality and power and its constituents. CO 4: Experience the rights and its theories. CO 5: Understanding of political ideologies.			

Program	Semester	Course Code	Course Name
BA	III		INDIAN GOVERNMENT AND POLITICS

On Completion of this Course, The students will able to

CO 1: Acquire knowledge about the historical background of Constitutional development in India.

CO 2: Understand the philosophical foundations and salient features of the Indian Constitution.

CO 3: Analyse the relationship between State and individual in terms of Fundamental Rights and Directive Principles of State Policy.

CO 4: Understand the composition of and functioning of Union Government as well as State Government.

CO 5: Analyse the judicial system of the country and its emerging trends such as judicial reforms.

Program	Semester	Course Code	Course Name
BA	IV		INDIAN POLITICAL PROCESS

On Completion of this Course, The students will able to

CO 1: Know and understand the federal system of the country and some of the vital contemporary emerging issues.

CO 2: Evaluate the electoral system of the country and to identify the areas of Electoral Reforms.

CO 3: Know the constitutional base and functioning of local governments with special emphasis on 73rd and 74th Constitutional Amendment Acts.

CO 4: Understand the Dynamics of the Indian politics, challenges faced and gain a sensitive comprehension to the Contribute Factors.

CO 5: Analyse the role of Central and State government in the local development.

Program	Semester	Course Code	Course Name
BA	IV		WESTERN POLITICAL THOUGHT

On Completion of this Course, The students will able to

CO 1: Understand the fundamental contours classical, western political philosophy, basic features of medieval political thought and shift from medieval to modern era.

CO 2: Understand the Social Contract Theory and appreciate its implications on the perception of state and its role.

CO 3: Acquaint with the Liberal and Marxist philosophy and analyse some trends in western political thought.

CO 4: Critically analyse the Evolution of Western Political Thought.

CO 5: Analyse different Medieval thinker's philosophy on Law. Justice and Equality

Program	Semester	Course Code	Course Name
BA	V		OFFICE MANAGEMENT

On Completion of this Course, The students will able to
CO 1: Understand fundamental knowledge of Office Management that can be applied to a career.
CO 2: Have knowledge on office administration and identify job competencies.
CO 3: Analyse the importance of designing the form in Office.
CO 4: Understand the importance of record management, allied sections and to identify the challenges in the background of ICT
CO 5: Enhance skills, strategies and techniques to compete with the global competencies in office management.

Program	**Semester**	**Course Code**	**Course Name**
BA	V		PERSONAL ADMINISTRATION

On Completion of this Course, The students will able to
CO 1: Understand Personnel Administration that can be applied to a career.
CO 2: Acquire knowledge on recruitment, selection and training and identify job competencies.
CO 3: Understand the importance and role of civil services in Indian Governance.
CO 4: Provide an overview on issues in administration And Enhance skills, strategies and techniques for redressal of grievances in administration.
CO 5: Analyse the importance of ethics in administrative system

Program	Semester	Course Code	Course Name
BA	II		Social and Cultural History of Andhra Pradesh

CO 1: Will get a picture of the evaluation of social, economic, and religious culture aspects of Andhra through various ruling dynasties.
CO 2: Students will understand they impact of British over Andhra.
CO 3: will gain knowledge about the efforts made by native Telugu intellectuals. In awakening and strengthening for the people and the region.
CO 4: Will get to know the contributions made by the Telugu people in this struggle for India's independent
CO 5: Will understand the factors behind demand for separate state for Telugu and also learn about the struggles and movements launched in achieving in the Demand further will provide an analysis of the sub regional and separatist movements launched in Andhra since 1956-2014.

DEPARTMENT OF HISTORY			
BA	II		Social and Cultural History of Andhra Pradesh

CO 1: Will get a picture of the evaluation of social, economic, and religious culture aspects of Andhra through various ruling dynasties.
CO 2: Students will understand they impact of British over Andhra.
CO 3: will gain knowledge about the efforts made by native Telugu intellectuals. In awakening and strengthening for the people and the region.
CO 4: Will get to know the contributions made by the Telugu people in this struggle for India's independent
CO 5: Will understand the factors behind demand for separate state for Telugu and also learn about the struggles and movements launched in achieving in the Demand further will provide an analysis of the sub regional and separatist movements launched in Andhra since 1956-2014.

Program	Semester	Course Code	Course Name
B.A,	IV	HIS244HCA	HISTORY & CULTURE OF ANDHRA (1512 TO 1956 AD)

After successful completion of this course, the student will be able to:
CO 1: Interpret social and political and cultural transformation from medieval modern Andhra
CO 2: Relate key historical developments during medieval period occurring in coastal Andhra and Telangana regions and analyze socio - political and economic changes under Qutb Shahi rulers
CO 3: Understand gradual change, or change in certain aspects of society in Andhra, rather than rapid or fundamental changes
CO 4: Explain how the English East India Company became the most dominant power

Program	Semester	Course Code	Course Name
B.A,	V	HIS356THS	Tourism and Hospitality Services

After successful completion of this course, the student will be able to:
CO 1: Understand hospitality as a career
CO 2: Inculcate interpersonal skills
CO 3: Develop the ability for multitasking and crisis management
CO 4: Understands the spirit of teamwork
CO 5: Acknowledge the importance of guest service and satisfaction.

Program	Semester	Course Code	Course Name
B.A,	V	HIS357TGO	Tourism Guidance and Operating Skills

After successful completion of this course, the student will be able to:
CO 1: Acquire tour guiding, operating and soft skills
CO 2: Understand different situations under which one has to work
CO 3: Cultivate cultural awareness and flexibility
CO 4: Understand and apply team spirit

DEPARTMENT OF BIOTECHNOLOGY

Program	Semester	Course Code	Course Name
B.Sc.,	II		Biomolecules, analytical techniques

CO 1:Gains knowledge on the overall classification, structures and functions of carbohydrates, amino acids and proteins
CO 2: Gains knowledge on the overall classification, structures and functions of nucleic acids, lipids, vitamins and bioenergetics
CO 3: Understands and applies the concepts of chromatography and centrifugation
CO 4: Understands and applies the concepts of electrophoresis and Spectroscopy
CO 5: Understands and applies the knowledge of Microscopy, Laser techniques

Program	Semester	Course Code	Course Name
B.Sc.,	II		MICROBIOLOGY, CELL BIOLOGY

CO 1: Gains knowledge on the ultrastructure of the bacteria and applies the concepts of staining and sterilisation techniques
CO 2: Gains knowledge on various microbial species, nutritional types in bacteria and growth curve of bacteria
CO 3: Understands the structure of a cell and cell organelles and its functions, cell cycle, division, and death
CO 4: Understands cell signaling pathways
CO 5: Understands Central Dogma of a cell, genome organization and mutations

Program	Semester	Course Code	Course Name
B.Sc. (Biotechnology)	III	BTY233MOB	Molecular Biology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Students will be able to acquire and articulate knowledge relevant to genome structure, and they will study the evidences regarding DNA proving as genetic material.
CO 2: The students will gain thorough knowledge about the enzymes involved in DNA replication and its mechanism.
CO 3: The students will be able to know the role of enzymes involved in Transcription process, general characteristics, and its mechanism.
CO 4: Acquire the features and properties of genetic code and how the translation process begins.
CO 5: Understand the concepts needed to explain gene regulation and expression. With this explanation, they will gain knowledge regarding the operon concepts.
CO 6: Learn molecular biology skills applicable to molecular biology research or clinical methods, including accurately reporting observation and analysis.

Program	Semester	Course Code	Course Name
B.Sc. (Biotechnology)	IV	BTY245rDT	rDNA technology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: This course aims to facilitate students in acquiring knowledge about various types of enzymes involved in genetic engineering and their applications in recombinant technology.
CO 2: Students will develop a thorough understanding of various cloning vehicles, their unique features, and the necessity for additional gene elements in them. The course covers topics such as genomic library construction, maintenance, and a discussion of their advantages and disadvantages.
CO 3: The focus of this course is on Polymerase Chain Reaction (PCR), including its main principles, amplification strategies, and applications, with a special emphasis on its relevance during situations like the COVID-19 pandemic. Additionally, the course explores the application of PCR in sequencing amplified products and gene transfer techniques for permanent use.
CO 4: Students will gain extensive knowledge of various gene transfer mechanisms based on different cell sources, along with a comprehensive understanding of their unique mechanisms, advantages, and disadvantages.
CO 5: The course delves into advanced application techniques such as Restriction Fragment Length Polymorphism (RFLP), Random Amplified Polymorphic DNA (RAPD), and various other important applications of recombinant DNA technology.

Program	Semester	Course Code	Course Name
B.Sc. (Biotechnology)	VI	BTY366PABT	Plant & Animal Biotechnology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: The course is designed to impart fundamental knowledge to students in plant biotechnology, including proficiency in sterile techniques, media preparation, and plant tissue culture techniques.
CO 2: Students will gain knowledge in micropropagation, understanding various steps involved, production of haploid plants, and exploring their applications. The curriculum covers plant regeneration, methods of organogenesis, cryopreservation, and secondary metabolites.
CO 3: This section focuses on various types of animal cell culture media, emphasizing the importance of serum, and delves into the physicochemical properties of media. Key concepts include the establishment and maintenance of cell lines, along with an exploration of commonly used cell lines.
CO 4: The unit emphasizes gene therapy applications and explores various animal models used in biological research. Gene recombination methods involved in the production of insulin and somatostatin are taught.
CO 5: The course places a spotlight on Intellectual Property Rights (IPR) and patents, addressing the right of protection for inventions.
CO 6: Students will acquire proficiency in handling basic aseptic techniques essential in the fields of plant and animal biotechnology

Program	Semester	Course Code	Course Name
B.Sc. (Biotechnology)	VI	BTY367EIBT	Environmental And Industrial Biotechnology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Acquiring and articulating knowledge relevant to various types of pollution, key compounds causing pollution, their measurement techniques, and control measures using biotechnological processes.
CO 2: Gaining knowledge on various bio processes in the degradation and remediation of pollutants, wastes, and understanding the role of biotechnology in these processes.
CO 3: Emphasizing concepts of biofuels, their importance in addressing current challenges, the significance of biogas, and the concepts of phytoremediation.
CO 4: Understanding the basic design of a bioreactor, knowledge on downstream processing, and discussing various processes involved. Highlighting the industrial production of vaccines and insulin based on current technological developments.
CO 5: Recognizing the need for bioinformatics and its applications. Developing knowledge in searching for DNA/protein sequences, retrieving them, and aligning them for better analysis.
CO 6: Exploring various measurement techniques of pollutants, including dry lab techniques such as searching, retrieving, and aligning them.

DEPARTMENT OF MICROBIOLOGY

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	I		Introduction to classical biology

Course Outcomes: By successful completion of the course, students will be able to;
CO1: Thestudentwillbeabletolearnthediversityandclassificationofliving organisms and understand their chemical, cytological, evolutionary, and genetic principles.
CO 2: Learn the principles of classification and preservation of body
CO 3: Understand the plant anatomical, physiological, and reproductive processes.
CO4: Knowledge on animal classification, physiology, embryonic development, and the economic importance.
CO5: Outline the cell components, cell processes like cell division, heredity, and molecular processes.

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	I		Introduction to classical biology
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the historical significance of microbiology and the contributions of key scientists. CO 2: Recognize the classification of microorganisms and their place in the living world. CO 3: Comprehend the scope and applications of microbiology, including the origin of microbial life and the distinction between eukaryotic and prokaryotic cells CO 4: Describe the characteristics of bacteria, archaea, fungi, algae, and protozoa. CO 5: Describe viruses, including their nature, composition, and diversity in structure.			

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	I		Introduction to Applied biology
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the historical significance of microbiology and the contributions of key scientists. CO 2: Recognize the classification of microorganisms and their place in the living world. CO 3: Comprehend the scope and applications of microbiology, including the origin of microbial life and the distinction between eukaryotic and prokaryotic cells CO 4: Describe the characteristics of bacteria, archaea, fungi, algae, and protozoa. CO 5: Describe viruses, including their nature, composition, and diversity in structure.			

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	II		Introduction to Microbiology
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the historical significance of microbiology and the contributions of key scientists. CO 2: Understand the historical significance of microbiology and the contributions of key scientists. CO 3: Recognize the classification of microorganisms and their place in the living world. CO 4: Comprehend the scope and applications of microbiology, including the origin of microbial life and the distinction between eukaryotic and prokaryotic cells. CO 5: Describe the characteristics of bacteria, archaea, fungi, algae ,and protozoa			

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	II		BACTERIOLOGY AND VIROLOGY

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Implement safety protocols, handling hazardous materials, and practicing personal protective measures.
CO 2: Identify microscope parts, adjusting focus and diaphragm, and accurately observing and documenting microscopic images.
CO 3: Prepare smears, identifying different microorganisms, and interpreting microscopic characteristics.
CO 4: Analyze electron micrographs, identifying virus types, and describing their morphology and size.
CO 5: Operate Autoclave, Hot Air Oven, and Laminar Air Flow Chamber for sterilization

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	IV		Immunology & Medical Microbiology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the key concepts in immunology and overall organization of the immune system
CO 2: Be able to explain the significance of maintaining a state of immune tolerance sufficient to prevent the emergence of autoimmunity
CO 3: Be able to explain the significance of maintaining a state of immune tolerance sufficient to prevent the emergence of autoimmunity
CO 4: Be able to analyse the pathogenesis of some important bacterial, fungal and viral infections of humans and be able to identify causative agents
CO 5: Operate Autoclave, Hot Air Oven, and Laminar Air Flow Chamber for sterilization

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	III		Microbial Genetics & Molecular Biology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the terms and technologies related to Microbial genetics and Molecular biology.
CO 2: Able to explain the significance of central dogma of gene action and to gain knowledge about DNA as genetic material, Enzymology and replication
CO 3: Understand the molecular mechanism involved in transcription & translation
CO 4: To know the concept of horizontal gene transfer mechanisms among the bacteria
CO 5: Be familiar about r-DNA technology and their applications

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	IV		Industrial microbiology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Acquire knowledge of screening of industrially important microorganisms and techniques applicable for improvement of microorganisms
CO 2: Understand the rationale in medium formulation & design for microbial fermentation, sterilization of medium and different types of fermentation processes.
CO 3: Identify the significance of industrially important microbial enzymes
CO 4: Gain knowledge of role of micro-organism in various industrial productions.
CO 5: Be familiar with various microbial product recovery and purification process.

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	V		Food Agriculture and Environmental Microbiology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: understand the role and significance of microbial inactivation, adaptation and environmental factors (i.e., Aw, pH, temperature) on growth and response of microorganisms in various environments
CO 2: Able to identify the important pathogens and spoilage microorganisms in foods and the conditions under which they will grow.
CO 3: The unit enables to have knowledge about plant growth promoting microorganisms, nitrogen fixation and biofertilizers
CO 4: This unit provides the student with the basic Concept of diseases in plants and their control
CO 5: This unit gives an idea about the solid waste management and liquid waste management

Program	Semester	Course Code	Course Name
B.Sc. (Micro Biology)	V		Management of Human Microbial Diseases and Diagnosis

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: To study about the pathogenicity of diseases and diagnostic methods
CO 2: Able to explain the collection of clinical specimens and their transport methods
CO 3: Understand the principles and applications of all microorganisms by cultural methods
CO 4: Perform the immunological tests for the identification of microorganisms
CO 5: Perform the antibiotic sensitivity methods for bacteria
unit provides the student with the basic Concept of diseases in plants and their control

DEPARTMENT OF FOOD TECHNOLOGY

Program	Semester	Course Code	Course Name
B.Sc.	I		Introduction to classical biology
Course Outcomes: By successful completion of the course, students will be able to; CO1: Thestudentwillbeabletolearnthediversityandclassificationofliving organisms and understand their chemical, cytological, evolutionary, and genetic principles. CO 2: Learn the principles of classification and preservation of body CO 3: Understand the plant anatomical, physiological, and reproductive processes. CO4: Knowledge on animal classification, physiology, embryonic development, and the economic importance. CO5: Outline the cell components, cell processes like cell division, heredity, and molecular processes.			

Program	Semester	Course Code	Course Name
B.Sc.	I		Introduction to Applied biology
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the historical significance of microbiology and the contributions of key scientists. CO 2: Recognize the classification of microorganisms and their place in the living world. CO 3: Comprehend the scope and applications of microbiology, including the origin of microbial life and the distinction between eukaryotic and prokaryotic cells CO 4: Describe the characteristics of bacteria, archaea, fungi, algae, and protozoa. CO 5: Describe viruses, including their nature, composition, and diversity in structure.			

Program	Semester	Course Code	Course Name
B.Sc.	II		FOOD BIOCHEMISTRY
Course Outcomes: By successful completion of the course, students will be able to; CO1: To Study about Classification structure and functions of Carbohydrates. CO2: To Study about classification structure and function of Proteins CO3: To Study about classification, structure and functions of lipids CO4: To Study about Classification and specificity of Enzymes. CO5: To know about the Fundamental prosperities of water classification of vitamins			

Program	Semester	Course Code	Course Name
B.Sc.	II		HUMAN NUTRITION
Course Outcomes: By successful completion of the course, students will be able to; CO1: To Understand about Nutrition, and importance of food for Health CO2: To Analyse about different vitamins and minerals and their importance CO3: To know about Balanced diet and Recommended Daily Allowances CO4: To study about diet surveys and Vitamin Deficiency Control Programmes CO5: To gain knowledge about international agencies like WHO, FAO, UNICEF and CARE			

Program	Semester	Course Code	Course Name
B.Sc.	III		TECHNOLOGY OF OILS AND FATS
Course Outcomes: By successful completion of the course, students will be able to; CO-1- Students will be able to acquire the knowledge about oils, fats, and their derivatives as fundamental ingredients of many food products. CO- 2- To provide students with the knowledge necessary for a conscious use of oils and fats in food formulations. CO-3 - Students will be able to acquire the knowledge about optimization of production processes of the foods containing fats and oils. CO- 4- Students will be able to acquire the knowledge about the best oils and fats for food formulations, considering their chemical and physical characteristics, technological properties. CO- 5 – Students will be able to acquire the knowledge about the by-products that are derived from the oil refining.			

Program	Semester	Course Code	Course Name
B.Sc.	III		TECHNOLOGY OF MILK AND MILK PRODUCTS
Course Outcomes: By successful completion of the course, students will be able to; CO-1-To know the need for and importance of dairy industry CO-2-To know the compositional and technological aspects of milk and Processed milk products. CO-3-To develop young entrepreneurs for self-employment through dairy technology and associated activities. CO-4-To know the utilization of by-products of dairy industry			

Program	Semester	Course Code	Course Name
B.Sc.	IV		POST HARVEST TECHNOLOGY OF FIELD CROPS
Course Outcomes: By successful completion of the course, students will be able to; CO-1- Comprehensive Understanding of Post Harvest Technology Principles CO-2- Proficiency in Cereal Processing Techniques CO-3 - Expertise in Pulses and Millets Processing CO-4 - Application of Post Harvest Techniques in Fruits, Vegetables, and Spices CO-5 - Effective Strategies for Controlling Food Losses			

Program	Semester	Course Code	Course Name
B.Sc.	IV		TECHNOLOGY CONFECTIONERY
Course Outcomes: By successful completion of the course, students will be able to; CO-1- Students will be able to acquire the knowledge about the role of ingredients in confectionaries. CO-2- Students will be able to acquire the knowledge about the sugar processing and treatment. CO-3 -Students will be able to acquire the knowledge about the technology involved in chocolate preparation. CO-4 - Students will be able to acquire the knowledge about the technology involved in confectionary and miscellaneous production. CO-5 - Students will be able to acquire the knowledge about the manufacturing of miscellaneous products.			

Program	Semester	Course Code	Course Name
B.Sc.	V		TECHNOLOGY OF MEAT, FISH, POULTRY, AND ITS PRODUCTS
Course Outcomes: By successful completion of the course, students will be able to; CO I- students will be able to acquire the knowledge about the structure and nutritive value of the met. CO-2 – students will be able to acquire the knowledge about slaughtering techniques of poultry and meat. CO-3 – Students will be Able to acquire the knowledge about the processing of meat CO-4- Students will be able to acquire the knowledge about different processing techniques of poultry and fish			

Program	Semester	Course Code	Course Name
B.Sc.	V		BAKING SCIENCE AND TECHNOLOGY
Course Outcomes: By successful completion of the course, students will be able to; CO I-To understand the science and technology of baking CO 2-To the role of different ingredients in baking CO 3- To develop skills in planning and maintenance of a baking institution. CO 4- To gain knowledge about the bread, formulation & ingredients. CO 5-To learn the preparation of frozen dough products & application of starches in the bakery industry.			

ARTIFICIAL INTELLIGENCE

Program	Semester	Course Code	Course Name
B.Sc. AI	II		PYTHON FOR DATA SCIENCE
Course Outcomes: By successful completion of the course, students will be able to; CO 1-To Understand Features and basic concepts of python. CO 2-To learn control structures in python and apply them to real world problems. CO 3- To implement functions and modules in python. CO 4- To understand data structures in python. oops concepts. CO 5-To construct data and perform data analysis.			

Program	Semester	Course Code	Course Name
B.Sc. AI	III		DOCUMENT ORIENTED DATABASE
Course Outcomes: By successful completion of the course, students will be able to; CO 1- Have knowledge Architecture about database and DBMS CO 2-Able to know No SQL databases, various features of Mongo DB, the installation procedure, and how to interact with MongoDB CO 3- Able to work on Mongo DB's rich query language to support create, read, update, and delete (CRUD) operation. CO 4- Analyses the aggregation framework to perform aggregation operations. CO 5-Able to work on indexes, types of indices, index properties, and the various indexing strategies to be considered. Indexes are used to improve the performance of a query.			

Program	Semester	Course Code	Course Name
B.Sc. AI	III		OPERATING SYSTEMS

Course Outcomes: By successful completion of the course, students will be able to;
CO 1- Analyse the services and functions of operating systems
CO 2-Analyse the concepts of processes in operating system and illustration of the scheduling of processor for a given problem instance.
CO 3- Analyse memory management techniques, concepts of virtual memory.
CO 4- To understand Introduction to Unix:- Architecture of Unix, Features of Unix , Unix Commands.
CO 5-To understand Shell programming and Simple shell program examples.

Program	Semester	Course Code	Course Name
B.Sc. AI	III		OBJECT ORIENTED PROGRAMMING

Course Outcomes: By successful completion of the course, students will be able to;
CO1: Overview of java programming, history, and its features. (PO5, PO7)
CO2: Understand fundamentals of programming such as variables, conditional and iterative execution, statements, etc. (PO5, PO6, PO7)
CO3: Understand the principles of arrays, inheritance, packages, and multi-threading. (PO5, PO6, PO7)
CO4: Understand the Fundamental features of Managing Errors, Exceptions and Applet Programming. (PO5, PO6, PO7)
CO5: Understand the Files concept in java.(PO5,PO6,PO7)

Program	Semester	Course Code	Course Name
B.Sc. AI	IV		DATA WAREHOUSING AND DATA MINING

Course Outcomes: By successful completion of the course, students will be able to;
CO1: To understand the principles of Data warehousing and Data Mining
CO2: To be familiar with the Data warehouse architecture and its Implementation
CO3: To know the Architecture of a Data Mining system
CO4: To understand the various Data preprocessing Methods
CO5: To perform classification and prediction of data

Program	Semester	Course Code	Course Name
B.Sc. AI	IV		DATA WAREHOUSING AND DATA MINING
Course Outcomes: By successful completion of the course, students will be able to; CO1: To understand the principles of Data warehousing and Data Mining CO2: To be familiar with the Data warehouse architecture and its Implementation CO3: To know the Architecture of a Data Mining system CO4: To understand the various Data preprocessing Methods CO5: To perform classification and prediction of data			

Program	Semester	Course Code	Course Name
B.Sc. AI	IV		MACHINE LEARNING USING PYTHON
Course Outcomes: By successful completion of the course, students will be able to; CO1: Explain the basic concepts of machine learning CO2: Construct supervised learning models. CO3: Construct unsupervised learning algorithms. CO4: Evaluate and compare different models			

Program	Semester	Course Code	Course Name
B.Sc. AI	IV		INTRODUCTION TO AI
Course Outcomes: By successful completion of the course, students will be able to; CO1: Develop various basic python programs. CO2: Analyse and develop solutions for various problems like water jug, Tic – Tack – Toe CO3: Develop programs using DFS, BFS, AI and hill climbing algorithms CO4: Develop python programs for analysing given data set. CO 5: Develop python programs for implementing Bayes Classification			

Program	Semester	Course Code	Course Name
B.Sc. AI	V		PREDICTIVE ANALYTICS USING PYTHON
Course Outcomes: By successful completion of the course, students will be able to; CO1: Understand prediction-related principles, theories, and approaches. CO2: Learn model assessment and validation CO3: Understand the basics of predictive techniques and statistical approaches CO4: Understand basics of neural networks CO 5: Analyse supervised and unsupervised algorithms.			

Program	Semester	Course Code	Course Name
B.Sc. AI	V		ALGORITHMS FOR INTELLIGENT SYSTEMS
Course Outcomes: By successful completion of the course, students will be able to; CO1: Understanding the foundations of Artificial Intelligence CO2: Representing a problem as a search solving problem. CO3: Searching a space of answers for a solution to a problem in practical time. CO4: Representing problems in terms of logic and deduction. CO 5: Representing intelligent behaviour in terms of agent.			

Program	Semester	Course Code	Course Name
B.Sc. AI	V		NATURAL LANGUAGE PROCESSING
Course Outcomes: By successful completion of the course, students will be able to; CO1: To understand the use of CFG and PCFG in NLP CO2: To learn control structures in python and apply them to real world problems CO3: To understand the role of semantics of sentences and pragmatics CO4: To apply the NLP techniques to IR applications CO 5: To construct data and perform data analysis.			

Program	Semester	Course Code	Course Name
B.Sc. AI	VI		SOFTWARE PROJECT MANAGEMENT
Course Outcomes: By successful completion of the course, students will be able to; CO1: Evaluate and decide the software project management. (PO5, PO7) CO2: Determine and classify the project life cycle and estimate the effort of Agile methods. CO3: Formulate the project activity plan and project risk management CO4: Organize and manage the project contracts. CO 5: Establishing the staffing pattern and Document the organizational behaviour.			

DEPARTMENT OF AVIATION

Program	Semester	Course Code	Course Name
BBA AVIATION	I		AIRLINE CUSTOMER SERVICE

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: The better standards of the customer service.
CO 2: How to maintain the effective communication.
CO 3: The techniques of handling the difficulty customer by knowing the personality of the customer.
CO 4: The different cultures and cross-cultural lifestyles that are existing in the society.

Program	Semester	Course Code	Course Name
BBA AVIATION	I		BUSINESS ORGANISATION

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the concepts related to business
CO 2: Familiarize the students about various sources of finance
CO 3: Enlighten with nature and importance of business organizations
CO 4: Gain knowledge about various types of business organizations
CO 5: Understand the functioning of Joint Stock companies and also necessary documents to be needed.

Program	Semester	Course Code	Course Name
BBA AVIATION	I		INTRODUCTION TO AIR CARGO

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the concepts related to business
CO 2: Familiarize the students about various sources of finance
CO 3: Enlighten with nature and importance of business organizations
CO 4: Gain knowledge about various types of business organizations
CO 5: Understand the functioning of Joint Stock companies and also necessary documents to be needed.

Program	Semester	Course Code	Course Name
BBA AVIATION	I		PRINCIPLES OF MANAGEMENT

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Outline various elements that constitute Management Functions along with their respective impact on business organization.
CO 2: Understand the relative impact of elements Management Functions- both Planning and Decision making.
CO 3: Interpret the repercussions of Organizing Function in business organizing.
CO 4: Illustrate the challenges and the implications of Directing Function in business organization.
CO 5: Make the student well acquainted with the concept of controlling function

Program	Semester	Course Code	Course Name
BBA AVIATION	I		AIRLINE TRAVEL & TOURISM INDUSTRY

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: The relationship b/w Tourism and airline industry
CO 2: What exactly is the service industry.
CO 3: What different organizations, intuitions are helping the service industry to achieve customer's trust.
CO 4: How to win the customer loyalty.
CO 5: Different technological evolutions that are happening in the service industry.

Program	Semester	Course Code	Course Name
BBA AVIATION	I		FUNDAMENTALS OF AVIATION MANAGEMENT

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: The relation b/w aviation and tourism industry
CO 2: History and evolution of service industry.
CO 3: They will gain the knowledge regarding various organizations and role in promoting the service industry.
CO 4: Current trends in the aviation industry.
CO 5: How the day-to-day life in the airport will be

Program	Semester	Course Code	Course Name
BBA AVIATION	I		AIR TRANSPORTATION SAFETY AND SECURITY

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Different safety and security measures that are practiced at airports and by airlines
CO 2: What a major safety and security regulations are helping them to conduct the operations safely.
CO 3: Different technological evolutions that are happening to tackle the terrorist and security threats.
CO 4: Different legislations, regulations, acts that are helping to overcome the safety and security threats.

Program	Semester	Course Code	Course Name
BBA AVIATION	II		AIRCRAFT MAINTENANCE MANAGEMENT

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: The maintenance activities that are carried regularly for the aircrafts
CO 2: The different safety and security measures that has to be carried during the aircraft maintenance.
CO 3: SOP is that has to be carried during the maintenance of aircraft.
CO 4: Types audits that are required to be carried to check the quality standards

Program	Semester	Course Code	Course Name
BBA AVIATION	II		AIR TRAFIC CONTROLLS

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: How ATC units are doing their daily operations,
CO 2: Air Traffic Controls priorities and their problems while handling the different types of air traffic.
CO 3: Different classifications of airspace used to handle the air traffic.
CO 4: Different types of Air Traffic Control Units, and zones

Program	Semester	Course Code	Course Name
BBA AVIATION	II		BUSINESS STATISTICS

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: After successful completion of the course students will be able to apply technology to statistical analysis and problem solving.
CO 2: Solve a range of problems using the techniques covered
CO 3: Conduct basic statistical analysis of data.

Program	Semester	Course Code	Course Name
BBA AVIATION	II		ONBOARD EMERGENCY

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: The technological evolution to tackle the unlawful activities.
CO 2: How to handle the emergency situations effectively.
CO 3: About the turbulence and its management.
CO 4: Safety measures that are to be carried in the air transportation

Program	Semester	Course Code	Course Name
BBA AVIATION	IV		AIR TRANSPORT AND FLIGHT OPERATIONS
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Aviation its Phonetics and layout of airport CO 2: The different operation procedures like check-in process, security checkpoints, time reference system, baggage area. CO 3: Airside operations i.e., turnaround activities CO 4: 4 forces of flight as well as aircraft cabin and its pressurization and steps of FSI			

Program	Semester	Course Code	Course Name
BBA AVIATION	V		Human Resource Management
Course Outcomes: By successful completion of the course, students will be able to; CO 1 Resolving disputes and conflicts in the market. CO 2: Different types of bilateral agreements. CO 3: The relations b/w the organizations CO 4: The organizational structures and trade unions.			

Program	Semester	Course Code	Course Name
BBA AVIATION	V		MANAGING AIRPORT - AN INTERNATIONAL PERSPECTIVE
Course Outcomes: By successful completion of the course, students will be able to; CO 1: How the Airport are managed. CO 2: The economic structure of the airport. CO 3: Different departments and their hierarchy, CO 4: Different airport types and their designs.			

Program	Semester	Course Code	Course Name
BBA AVIATION	V		TRAVEL FORMALITIES & AIRPORT ESSENTIALS
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Different types of Passports that getting issued by different nations. CO 2: Different types of Visas that getting issued by different nations. CO 3: Different travel documents that are required to carry. CO 4: Different loyalty programs offered by airlines.			

E-COMMERCE OPERATIONS

Program	Semester	Course Code	Course Name
BMS	III	BMS231MIS	MIS for E-Commerce

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the concepts of Management Information Systems and their historical context.
CO 2: Explore global E-business processes and comprehend electronic commerce concepts.
CO 3: Understand the relationship between decision making and information systems, and analyze systems for planned organizational change.
CO 4: Grasp the concepts of business intelligence, strategic, tactical, and operational decisions in MIS.
CO 5: Evaluate the role of MIS in managing global systems and understand system analysis and design

Program	Semester	Course Code	Course Name
BMS	III	BMS231LMO	Last Mile Operations

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the basics of last mile logistics in E-Commerce and its challenges.
CO 2: Describe the last mile processes, including forward and reverse logistics stages.
CO 3: Analyze various metrics and customer service processes involved in last mile logistics.
CO 4: Explain the prospects and innovations in last mile logistics, including technology trends.
CO 5: Understand the value creation aspects through network design, process improvement, and strategic decisions in reverse logistics.

Program	Semester	Course Code	Course Name
BMS	III	BMS231ELO	E-Commerce Logistics Operations

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the basics of logistics in E-Commerce and its role in the supply chain.
CO 2: Comprehend the process of capacity management and its application in inbound and outbound logistics.
CO 3: Explain the strategies used in logistics planning and execution, and understand the systems used in E-Commerce logistics.
CO 4: Understand the concepts of logistics and systems integration, and the interlink between logistics and operations.
CO 5: Evaluate the integration of logistics into operations, assess logistics operations, and understand partner termination processes.

Program	Semester	Course Code	Course Name
BMS	III	BMS231RLE	Reverse Logistics for E-Commerce
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the importance and challenges of reverse logistics in E-Commerce. CO 2: Describe the stages and tools in reverse logistics processes. CO 3: Analyze the shipping and information systems in reverse logistics, and assess the innovations and market prospects. CO 4: Understand the creation of value through network design, strategic decisions, and maintaining partnerships in reverse logistics. CO 5: Explore the impact of new technology trends and digital transformation on reverse logistics.			

Program	Semester	Course Code	Course Name
BMS	III	BMS231TFE	Transportation for E-Commerce
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the importance and functions of transportation in the supply chain. CO 2: Comprehend various transportation management techniques and modalities. CO 3: Understand transportation management systems and their integration with supply chain functions. CO 4: Analyze the socio-economic factors affecting transportation and explore the future trends in transportation. CO 5: Evaluate the benefits and risks of different transportation equipment and comprehend the upcoming tools and techniques in transportation.			

Program	Semester	Course Code	Course Name
BMS	IV	BMS241HLO	Hub and Line Operations
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the concepts of Hub & Line Operations in E-commerce and the importance of Line Haul logistics. CO 2: Analyze inbound and outbound logistics in the context of E-commerce and comprehend the layout of Processing Centers. CO 3: Explain the various machines and equipment used in hub operations and assess prospects in Line Haul Logistics. CO 4: Evaluate the relationship between logistics and fulfilment services and explore innovations and technology trends in Line Haul Logistics.			

Program	Semester	Course Code	Course Name
BMS	IV	BMS241PFE	Packaging for Ecommerce
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the concept of packaging in E-commerce, including types, functions, and materials. CO 2: Analyze the concept of brand equity and its relation to packaging in E-commerce. CO 3: Explain the packaging journey in E-commerce, from consumer research to order delivery and receipt. CO 4: Evaluate packaging techniques, technologies, and future prospects in the E-commerce industry.			

Program	Semester	Course Code	Course Name
BMS	IV	BMS241OIE	Outsourcing in Ecommerce
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the fundamentals of Outsourcing and its implementation in E-commerce businesses. CO 2: Analyze E-commerce outsourcing, assess strategic assessments, and understand risk management in outsourcing. CO 3: Explore the future trends and innovations in E-commerce outsourcing. CO 4: Evaluate the best practices in outsourcing assessments and techniques to assess and manage risks associated with outsourcing.			

Program	Semester	Course Code	Course Name
BMS	IV	BMS241FO	Fulfilment Operations
Course Outcomes: By successful completion of the course, students will be able to; Course Outcomes: CO 1: Understand the basics of Fulfilment operations in E-commerce, including operational models and key drivers. CO 2: Analyze the relationship between logistics and Fulfilment services, including warehousing aspects and packaging. CO 3: Explore the role of technology in Fulfilment processes and platforms. CO 4: Evaluate prospects in Fulfilment, including bundled orders, mini-Fulfilment via technology, and market trends.			

ZOOLOGY

Program	Semester	Course Code	Course Name
B.Sc.	I		Introduction to classical biology

Course Outcomes: By successful completion of the course, students will be able to;
Course Outcomes:
CO 1: Learn the principles of classification and preservation of biodiversity
CO 2: Understand the plant anatomical, physiological and reproductive processes.
CO 3: Knowledge on animal classification, physiology, embryonic development and their economic importance.
CO 4: Outline the cell components, cell processes like cell division, heredity and molecular processes.
CO 5: Comprehend the chemical principles in shaping and driving the macromolecules and life processes

Program	Semester	Course Code	Course Name
B.Sc.	I		Introduction to applied biology

Course Outcomes: By successful completion of the course, students will be able to;
Course Outcomes:
CO 1: Learn the history, ultrastructure, diversity and importance of microorganisms.
CO 2: Understand the structure and functions of macromolecules.
CO 3: Knowledge on biotechnology principles and its applications in food and medicine.
CO 4: Outline the techniques, tools and their uses in diagnosis and therapy.
CO 5: Demonstrate the bioinformatics and statistical tools in comprehending the complex biological data.

Program	Semester	Course Code	Course Name
B.Sc.	II		Animal diversity-i biology of non-chordates

Course Outcomes: By successful completion of the course, students will be able to;
Course Outcomes:
CO 1: Describe general taxonomic rules on animal classification
CO 2: Knowledge about important life processes and unique systems of non-chordates.
CO 3: Describing the parasitic adaptations and pathogenicity in Helminthes, Vermicompost in Annelida
CO 4: Describe higher invertebrate phyla using examples and importance of insects and Molluscs
CO 5: Describe Echinodermata to Hemichordate with suitable examples and larval stages in relation to the phylogeny

Program	Semester	Course Code	Course Name
B.Sc.	II		Cell and molecular biology

Course Outcomes: By successful completion of the course, students will be able to;
Course Outcomes:
CO 1: Understand the basic unit of the living organisms and to differentiate the organisms by their cell structure.
CO 2: Describe fine structure and function of plasma membrane and different cell organelles of eukaryotic cells.
CO 3: Explain the cell cycle and bioenergetics of the cell
CO 4: Understand the central dogma of molecular biology and flow of genetic information from DNA to proteins
CO 5: Understand the gene expression phenomenon and biological importance of biomolecules

Program	Semester	Course Code	Course Name
B.Sc. (BZC)	III	ZOOCGME233(T)	Cell Biology, Genetics, Molecular Biology and Evolution

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Describe structure and functions of cell and cell organelles and to differentiate the organisms by their cell structure.
CO 2: Understand what life is and how it functions at cellular level.
CO 3: Have knowledge of history of origin of genetics, heredity, interaction of genes, inheritance patterns existing.
CO 4: be acquaintance with various aspects of genetics involved in sex determination, human karyotyping, and chromosomal aberrations
CO 5: gain knowledge about the central dogma of molecular biology and flow of genetic information from DNA to proteins.

Program	Semester	Course Code	Course Name
B.Sc. (BZC)	IV	ZOOPME244	Animal Physiology, Cellular Metabolism and Embryology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Describe the functions of important animal physiological systems including digestion, cardio-respiratory and renal systems.
CO 2: Understand the muscle contraction and nerve impulse transmission in vertebrates and knowledge of various hormones and their affects.
CO 3: Describe the structure, classification and chemistry of biomolecules and enzymes responsible for sustenance of life in living organisms
CO 4: Understand the basic metabolic activities in animals related to the catabolism and anabolism of various biomolecules
CO 5: Understands various in early embryonic development of vertebrates from gametogenesis to gastrulation and formation of primary germ layers.

Program	Semester	Course Code	Course Name
B.Sc. (BZC)	V	ZOO	Immunology and Animal Biotechnology

Course Outcomes: By successful completion of the course, students will be able to
CO 1: Have knowledge of the organs of Immune system, types of immunity, cells and organs of immunity.
CO 2: Describe immunological response as to how it is triggered (antigens) and regulated (antibodies)
CO 3: Understand the applications of Biotechnology in the fields of industry and agriculture including animal cell/tissue culture, stem cell technology and genetic engineering.
CO 4: Get familiarity with the tools and techniques of animal biotechnology.

AGRICULTURE AND SULLPLY CHAIN MANAGEMENT

Program	Semester	Course Code	Course Name
BMS	III	BMS231CHT	Cold Chain Technology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the fundamental concepts of Cold Chain and its importance in the preservation of agricultural produce.
CO 2: Demonstrate knowledge of Cold Chain infrastructure components, including refrigeration systems, insulation techniques, and distribution centers.
CO 3: Implement effective monitoring systems for temperature and humidity in Cold Chain logistics, utilizing automated and remote monitoring technologies.
CO 4: Apply principles of Reefer Logistics in transporting agricultural produce, including reefer container operations, handling chilled and frozen cargos, and ensuring good transportation practices.
CO 5: Practice good Cold Chain management, including SOPs for specific fruits and vegetables commodities, traceability, and adherence to quality standards for domestic and export markets.

Program	Semester	Course Code	Course Name
BMS	III	BMS231ES	ENVIRONMENTAL STUDIES

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the components of ecosystems, ecological structures, energy flow, and biogeochemical cycles (Unit I: Ecology).
CO 2: Analyze different types of pollution, their sources, standards, and adverse effects (Unit II: Pollution).
CO 3: Demonstrate knowledge of solid waste management, including classification, collection, disposal, and resource recovery methods (Unit III: Solid Waste Management).
CO 4: Explore non-conventional energy sources and assess their potential, especially in the

Program	Semester	Course Code	Course Name
BMS	III	BMS231HFP	Handling of Fresh Produces
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand fresh produce market preparation and categorization. CO 2: Apply value addition techniques such as sanitation, canning, and dehydration. CO 3: Implement tropical fruits ripening and grading techniques. CO 4: Proficiently execute fresh cut packing methods, including retail and special techniques. CO 5: Analyze challenges and opportunities in E-commerce delivery for fresh produce			

Program	Semester	Course Code	Course Name
BMS	III	BMS231HFP	Mechanization In Agri Logistics
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand agricultural mechanisation principles, transportation methods, and benchmarking processes. CO 2: Apply knowledge of product handling methods, automated systems, and traceability options in agri-logistics. CO 3: Demonstrate proficiency in automated storage management techniques, including palletisation, conveyors, silos, and AS&RS. CO 4: Utilize automation technologies for tracking and traceability, such as GPS, RFID, AGVS, RTWCS, CIW, and RFDT. CO 5: Grasp the basics of block chain technology and its applications in sustainable agriculture, transparency, and trust in agri-food systems.			

Program	Semester	Course Code	Course Name
BMS	III	BMS231ES	ENVIRONMENTAL STUDIES
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand the components of ecosystems, ecological structures, energy flow, and biogeochemical cycles (Unit I: Ecology). CO 2: Analyze different types of pollution, their sources, standards, and adverse effects (Unit II: Pollution). CO 3: Demonstrate knowledge of solid waste management, including classification, collection, disposal, and resource recovery methods (Unit III: Solid Waste Management). CO 4: Explore non-conventional energy sources and assess their potential, especially in the context of India (Unit IV: Non-Conventional Energy Sources). CO 5: Comprehend social issues related to environmental conservation, sustainable development, public awareness, and key environmental legislations in India (Unit V: Social Issues and EIA).			

Program	Semester	Course Code	Course Name
BMS	III	BMS231PM	Pest Management
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand pest categorization, significance in agriculture, and relevant laws and regulations. CO 2: Identify and assess major storage pests, recognize signs of infestation, and detect hidden infestation sources. CO 3: Learn insect pest control methods, including prophylactic treatments, insecticide application, and fumigation techniques. CO 4: Grasp methodologies for non-insect pest management, including fungi, bacteria, rodents, and birds, utilizing various control measures. CO 5: Comprehend Integrated Pest Management (IPM) principles, including sanitation, pest monitoring, preventive methods, and judicious curative measures, applying strategies in supply chain management.			

Program	Semester	Course Code	Course Name
BMS	III	BMS231RAM	Risk Assessment and Management
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Understand fundamental concepts of risk in supply chain management, including peril & hazard, risk categories, and risk prioritization. CO 2: Develop a risk management framework with strategies for identifying, mitigating, and auditing potential risks, and ensuring health and safety in warehousing. CO 3: Recognize insurable risks, understand insurance functions, and effectively manage insurance policies for agricultural produce. CO 4: Learn techniques for preventing and managing major perils like fire, flood, and ensuring security in agricultural storage and transport. CO 5: Comprehend regulatory compliance processes, identify non-insurable risks, and understand indemnification for risk mitigation in agricultural supply chains.			

Program	Semester	Course Code	Course Name
BMS	IV	BMS24IMM	Marketing Management
Course Outcomes: By successful completion of the course, students will be able to; CO 1: Discuss the importance of macro and micro environment in the company's marketing function. CO 2: Differentiate the consumer and institutional buyer behaviour. CO 3: Define the target segments for the product CO 4: Justify the importance of products, branding, and new product development. CO 5: Understand the importance of Channel of distribution			

Program	Semester	Course Code	Course Name
BMS	IV	BMS241AP	Agri-Preneurship

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: To get an understanding of the conceptual framework of entrepreneurship development in India.
CO 2: To learn about various processes involved in the development of an agri preneurship venture.
CO 3: To know about various potential options available towards setting up an agri-business venture.
CO 4: To learn about various challenges in the way of agri preneurship and strategies to overcome them.
CO 5: To know as to how to avail various benefits available under governmental support programmes for agri-business development.

Program	Semester	Course Code	Course Name
BMS	IV	BMS241AEI	Agricultural Exports & Imports

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the legal framework in agriculture, focusing on post-harvest management challenges and strategies for higher returns to farmers.
CO 2: Analyze the importance of quality standards in agricultural produce, including relevant acts and enforcement mechanisms.
CO 3: Evaluate legal aspects related to transportation logistics during post-harvest, including relevant acts governing transportation of agricultural produce.
CO 4: Assess the legal framework for storage, preservation, and warehousing of agricultural produce, including acts governing these aspects.
CO 5: Understand the legal aspects of marketing agricultural produce, including relevant acts, taxation, and trade regulations.

Program	Semester	Course Code	Course Name
BMS	IV	BMS241PT	Packaging Technology

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the history, importance, and functions of food and agri-products packaging, including material properties, design, and testing.
CO 2: Analyze wood, paper, glass, and metal packaging materials, including their structure, types, and uses, and compare wooden containers with CFB boxes.
CO 3: Apply packaging rules, labelling techniques, and technology usage for packaging fruits, vegetables, and their products.
CO 4: Comprehend aseptic packaging, active food packaging, edible films, coatings, and intelligent/smart/active packaging systems, and their food applications.
CO 5: Implement various packaging techniques, including knowledge of containers, primary and secondary packaging, and packaging machines, for effective food and agri-products packaging.

Program	Semester	Course Code	Course Name
BMS	IV	BMS241DVCM	Dairy Value Chain & Marketing

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Understand the historical development and current trends in dairy production globally and in India.
CO 2: Apply techniques for ensuring clean milk production and procurement, and comprehend milk contamination sources.
CO 3: Demonstrate knowledge of dairy operations, milk processing, quality assurance, and various milk products.
CO 4: Analyze milk marketing structures, distribution channels, and pricing factors, considering market segmentation.
CO 5: Evaluate the milk value chain, government policies, international regulations, and technology impact on dairy marketing.

ENGLISH

Program	Semester	Course Code	Course Name
ENGLISH	I		A course in communication and soft skill

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: Use reading skills effectively
CO 2: Demonstrate the use of good vocabulary
CO 3: Demonstrate an understanding of writing skills
CO 4: Acquire ability to use Soft Skills in professional and daily life
CO 5: Confidently use the tools of communication skills

Program	Semester	Course Code	Course Name
ENGLISH	II		A course in reading and writing skills

Course Outcomes: By successful completion of the course, students will be able to;
CO 1: To enable the students to heighten their awareness of correct usage of English Grammar in writing and reading
CO 2: To enable the students to improve their reading both in terms of fluency and comprehensibility
CO 3: To help the students to enlarge their vocabulary by learning new words
CO 4: To enable the students, strengthen their ability to write academic papers, essays and summaries using the process approach
CO 5: To enhance the ability to use the conventions of grammar when creating paragraphs, essays, and formal letters

Program	Semester	Course Code	Course Name
B. A, B.SC, B.COM, BBA, B.VOC.	III	ENG233EE	ENGLISH FOR EMPOWERMENT-III

On Successful completion of the course, the students will be able to:
CO 1: Form an idea about the various stages in the development of English language
CO 2: Distinguish between the different varieties of English used all over the world
CO 3: Understand the total content and underlying meaning in the context
CO 4: Write analytically in a variety of formats, including essays, reflective writing, and critical reviews of secondary sources
CO 5: Understand the process of communicating and interpreting human experiences through literary representation using historical contexts and disciplinary methodologies

Program	Semester	Course Code	Course Name
B. A [NGH]	III	ENG233BL	BRITISH LITERATURE

On Successful completion of the course, the students will be able to:
CO 1: Exposure to English Literature in all its variety from the 16th Century to the present day
CO 2: Insights into the major trends in English Literature
CO 3: Familiarize with the different genres of English Literature
CO 4: Understand and appreciate the different forms of literature
CO 5: Identify and discuss the main analytical concepts used in analysing literature

Program	Semester	Course Code	Course Name
B. A, B.SC, B.COM, BBA, B.VOC.	IV	ENG244EE	ENGLISH FOR EMPOWERMENT-IV [CSS-III]

On Successful completion of the course, the students will be able to:
CO 1: Think and analyse situations using critical and creative skills
CO 2: Display competence in oral and written communication
CO 3: Understand the importance and realize the opportunities available in learning communication and soft skills
CO 4: Develop awareness of appropriate communication strategies
CO 5: Understand the concepts related to high communicative approach
CO 6: Participate in discussions, ted talks, talk shows and live shows
CO 7: Reduces the phobia of speaking in a foreign language by ‘learning by doing’ technique through reading newspapers, drafting news articles and listening to various accents on YouTube
CO 8: Familiarize with varieties of spoken language and interact in various situations like Group Discussions, Interviews and making Presentations
CO 9: Upgrade their personality and presentation skills through open discussions

Program	Semester	Course Code	Course Name
B. A [NGH]	IV	ENG244LCC	LITERARY CROSS CURRENTS

On Successful completion of the course, the students will be able to:
CO 1: Familiarize the students with varieties of English and enable them to critically interact with literary writings from different contexts – cultural, social, political, historical, national, and philosophical
CO 2: Write and appreciate different types of prose and literature
CO 3: Critically engage with different cultures and history
CO 4: Establish connections across frontiers of disciplines
CO 5: Understand the different trends of English Prose style and theme during the evolution of English Prose from the 16th century to the late 20th century
CO 6: Familiar with important aspects of different genres of prose
CO 7: Acquire a wide-range vocabulary and a good understanding of the idiom of the language
CO 8: Understand the critical, theoretical, and technical traditions to the production of original literary works

Program	Semester	Course Code	Course Name
B. A [DGH]	V	ENG355CD	Cultural diversity, gender & human Rights

On Successful completion of the course, the students will be able to:
CO 1: Develop and expand imagination and expression and reduce self-consciousness and inhibition
CO 2: Write and appreciate different types of prose and literature
CO 3: Discover and break down blocks and barriers while exploring facets of their personality that were previously subdued
CO 4: Ability to speak in the actor's vocabulary of behaviour and action
CO 5: Build strong supple bodies that can play a variety of characters with various physical demands

AGRICULTURE AND RURAL DEVELOPMENT

Program	Semester	Course Code	Course Name
B. Sc.	II		Introductory agrometeorology and climate change

On Successful completion of the course, the students will be able to:
CO 1: To study climatic resources of a given area for effective crop planning
CO 2: To evolve weather based effective farm operations
CO 3: To study crop weather relationship
CO 4: To understand roles of agro meteorology in agriculture

Program	Semester	Course Code	Course Name
B. Sc.	II		Fundamentals of entomology- 1

On Successful completion of the course, the students will be able to:
CO 1: History of Entomology in India
CO2: Structure and modifications of insect antennae, mouth parts, legs, wing venation, modifications and wing coupling apparatus.
CO3: Types of reproduction in insects
CO4: Insect Taxonomy
CO5: Classification of class Insect up to orders, Relationship of class Insect with other classes of Arthropoda.

Program	Semester	Course Code	Course Name
B. Sc.	II		Introduction to Soil Science

On Successful completion of the course, the students will be able to:
CO1: Understands the Origin of soil – Soil and soil components – Mineral matter, organic matter, water, and air
CO2: Learns the classification of rocks based on mode of origin –Igneous rocks, sedimentary rocks, and metamorphic rocks
CO3: Understands the parent material – Classification of parent materials based on their mode of transport by different agents
CO4: Learns the soil density – bulk density and particle density – factors affecting density parameterisations of class Insect up to orders, Relationship of class Insect with other classes

Program	Semester	Course Code	Course Name
B. Sc.	II		Introduction to Soil Science

On Successful completion of the course, the students will be able to:
CO1: Understands the Origin of soil – Soil and soil components – Mineral matter, organic matter, water, and air
CO2: Learns the classification of rocks based on mode of origin –Igneous rocks, sedimentary rocks, and metamorphic rocks
CO3: Understands the parent material – Classification of parent materials based on their mode of transport by different agents
CO4: Learns the soil density – bulk density and particle density – factors affecting density parameterisations of class Insect up to orders, Relationship of class Insect with other classes

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	III	AGRO 201	Crop Production Technology – I (Cereals, Millets, and Pulses)

At the end of the course student will understand
CO1: Introduction and development of agriculture.
CO2: Nutrient management with special emphasis on nitrogen dynamics, micro nutrients INM
CO3: Harvesting -Yield attributes - yield - post harvest operations
CO4: Land Preparation - seeds and sowing - nutrient management - water management - weed management - climate resilient technologies
CO5: Maize- Origin- geographical distribution

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	III	AGRO 202	Crop production technology–ii (oil seeds, fiber, sugar, tobacco, and fodder crops

Course Outcomes
CO1: Importance of oilseed crops- edible and non – edible oils – nutritional value importance in Indian economy
CO2: Soil and climatic requirements - types - growth stages - land Preparation -seeds and sowing- seed treatment-seed rate-spacing-season-time and method of sowing varieties
CO3: Nutrient management- water management- weed management yield attributes – yield- Harvesting – post harvest operations- quality considerations – cropping systems
CO4: Nursery management-seeds and sowing for different types- seed treatment-seed rate-spacing-season-time and method of sowing
CO5: Ratoon cane management – factors affecting quality of sugarcane – arrowing– jaggery making – clarification
CO6: Origin - geographical distribution and productivity in India and Andhra Pradesh of ground nut, soyabean, sunflower, sesame, safflower, castor, Rapeseed, and mustard.
CO7: Forage crops- Importance- terminology in forage production-classification of fodders .

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	III	AENG-351	Protected cultivation and post-harvest technologies

Course outcomes
CO1: Understanding the concepts in greenhouse technology.
CO2: Acquaintance with the types of greenhouses.
CO3: Acquaintance with different materials for construction of greenhouses.
CO4: Understanding the concepts of Irrigation systems used in greenhouses.

B. Sc., Agriculture, and rural development	V	ENTO 332	Pests of horticultural crops and their management & beneficial insects

Course Outcomes
CO1: General account on nature and type of damage by pest of various vegetable crops, fruit crops, plantation crops, ornamental crops, narcotics, spices, and condiments.
CO2: Study of Bhendi- Shoot and fruit borer
CO3: insect pest of Mango- Leafhoppers, stem borer, nut weevil
CO4: insect pest of Crucifers- Diamond back moth, cabbage head borer, leaf Webber, aphid, painted bug, tobacco caterpillar and cabbage butterfly.
CO5: Silk worm diseases- Pebrine- Symptoms, mode of transmission.

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	V	SMCA301	AGRICULTURE INFORMATICS

Course Outcomes
CO1: Explain Windows explorer- Creating folder - Copy and paste functions - Control panel Notepad -WordPad etc.
CO2: Summarize MS word - Creating a document, saving, and editing
CO3: Discuss Use of options from tool bars – Format - Insert and tools (Spelling and Grammar) - Alignment of paragraphs and text.
CO4: Explain to Creating a table - Merging of cells - columns and row width - Formats etc.

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	V	AECO341	FARM MANAGEMENT AND PRODUCTION RESOURCE ECONONMICS

Course Outcomes
CO1: Definitions and Concepts Farm management and production Economics
CO2: To understand the Determination of optimum input and optimum output and decision rules.
CO3: To understand the types of production Function
CO4: To understand the Meaning and concept of cost, cost function /cost-output relationship - Types of production costs and their interrelationship - Importance of costs in managing farm business
CO5: Farm inventory - Meaning and importance of taking inventory on farm business - Different methods of appraisal and valuation of farm resources and products
CO6: Computation of depreciation cost of farm assets
CO7: Types of farming and types of Farm business Organization

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	V	HORT 381	POST-HARVEST MANAGEMENT AND VALUE ADDITION OF FRUITS AND VEGETABLES

Course Outcomes
CO1: Idea on fruits and vegetables that needs post-harvest management
CO2: Clear idea on causes for post-harvest loses
CO3: Knowledge on different preservation methods to avoid post-harvest loses.
CO4. Idea on packaging methods to avoid post-harvest loses

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	V	AEXT 391	COMMUNICATION SKILLS AND PERSONALITY DEVELOPMENT

Course Outcomes
CO1: Improvement in communication and grammar
CO2: Improved writing skill which is required for teaching and research purpose.
CO3: Holistic personality development
CO4: Coordinated functioning and time management.

Program	Semester	Course Code	Course Name
B. Sc., Agriculture, and rural development	V	PATH-372	DISEASES OF FIELD AND HORTICULTURAL CROPS AND THEIR MANAGEMENT-II

Course Outcomes
CO1: Etiology, symptoms, host-parasite relationship, and specific management practices of diseases in fruit crops.
CO2: Etiology, symptoms, host-parasite relationship, and specific management practices of diseases in vegetable crops.
CO3: Etiology, symptoms, host-parasite relationship, and specific management practices of diseases in flower crops.

RETAIL OPERATIONS

Program	Semester	Course Code	Course Name
BBA., RETAIL OPERATIONS	III	BBA231SM	SALES MANAGEMENT
COURSE OUTCOME: CO1: The learners will be able to understand the process of sales management CO2: The learners will be able to identify the role and responsibilities of the sales manager CO3: The learners will be able to know the concept of sales force and its responsibilities			

Program	Semester	Course Code	Course Name
BBA., RETAIL OPERATIONS	III	BBA231ECS	ERP & COMPUTER SKILLS
COURSE OUTCOME: CO1: The learners will be able to identify the impact of using ERP CO2: The learners will be able to know the working knowledge of how data is integrated in ERP			

Program	Semester	Course Code	Course Name
BBA., RETAIL OPERATIONS	III	BBA231CRM	CUSTOMER RELATIONSHIP MANAGEMENT
COURSE OUTCOME: CO1: The equip learners with the foundational knowledge of CRM CO2: The learners will be able to identify the importance of customer value management CO3: The learners will be able to know the best practices for long term profitability.			

Program	Semester	Course Code	Course Name
BBA., RETAIL OPERATIONS	III	BBA231CRM	CUSTOMER REDRESSAL MECHANISM
COURSE OUTCOMES: CO1: Learners able to know the key concepts in grievance redress mechanisms CO2: The learner will be able to investigate the key personal skills required and main roles and responsibilities of the grievance redress committee. CO3: Learner will be able to know what are the key elements of effective complaint handling and the steps undertaken in handling complaints.			

Program	Semester	Course Code	Course Name
BBA., RETAIL OPERATIONS	IV	BBA241FMD	FMCG DISTRIBUTION
COURSE OUTCOME: CO1: To know the roles & responsibilities of FMCG Distribution professionals CO2: Helps to understand the distribution management process.			
Program	**Semester**	**Course Code**	**Course Name**
BBA., RETAIL OPERATIONS	IV	BBA241NSR	NON-STORE RETAILING
COURSE OUTCOME: CO1: To develop knowledge of contemporary E- retail management issues at the strategic level. CO2: To describe and analyse the way E-retailing works, specifically the key activities and relationships. CO3: To provide an academic underpinning to the above through the application of E retailing theory and research.			

Program	Semester	Course Code	Course Name
BBA., RETAIL OPERATIONS	IV	BBA241FCA	FUNDAMENTALS OF FINANCIAL & COST ACCOUNTING
COURSE OUTCOMES: CO1: The student will be able to understand the importance of management accounting as a key input for managerial/ financial decision making. The students will be able to take financial decisions using tools of management accounting. CO2: Students will be able to apply the Basic knowledge of Management and cost accounting in the real-life situation CO3: This subject will enable them to enhance their ability and professional skills			

HOTEL MANAGEMENT

Program	Semester	Course Code	Course Name
B. Sc., Hotel Management	V	HM351ACP	ADVANCED CULINARY PREPARATION
By successful completion of the course, students will be able to; CO 1: This course develops the knowledge and understanding of international cuisine amongst students. CO 2: To impart knowledge on the function of Larder and Garde manger. CO 3: Finally, the course further introduces the students to the concepts of bakery & confectionery.			

B. Sc., Hotel Management	V	HM354FBM	Food & Beverage Management

Program	Semester	Course Code	Course Name

By successful completion of the course, students will be able to;
CO 1: To impart knowledge of cost controls aspect of the F & B department and related functions.
CO 2: This course enables the student to gain a better understanding of the roll of Food and Beverage Management
CO 3: It also helps them to acquire finer skills and thorough understanding of the managerial principles for overall development.

Program	Semester	Course Code	Course Name
B. Sc., Hotel Management	V	HM351ACP	ADVANCED CULINARY PREPARATION

By successful completion of the course, students will be able to;
CO 1: This course develops the knowledge and understanding of international cuisine amongst students.
CO 2: To impart knowledge on the function of Larder and Garde manger.
CO 3: Finally, the course further introduces the students to the concepts of bakery & confectionery.

Program	Semester	Course Code	Course Name
B. Sc., Hotel Management	V	HM351FP	Food Production – Lab IV

On successful completion of the course, students will be able to;
CO 1: It is recommended that Demonstrations be conducted in the initial stages to make the students familiar with practicals.
CO 2: Develop cooking skill in international cuisine
CO 3: Gain knowledge on different famous dishes in international cuisine.

Program	Semester	Course Code	Course Name
B. Sc., Hotel Management	V	HM352AM	Accommodation Management

By successful completion of the course, students will be able to;
CO 1: The subject tends to establish the importance of accommodation management within the hospitality industry.
CO 2: It equips the student to acquire knowledge & skills.
CO 3: To planning & designing aspects of the front office as Sales Department.

Program	Semester	Course Code	Course Name
B. Sc., Hotel Management	V	HM353BM	BAR MANAGEMENT

By successful completion of the course, students will be able to;
CO 1: This course enables the student to gain a better understanding of the role of Bar and Beverage Operation in the context.
CO 2: Overall bar operations.
CO 3: To familiarize the student with the current trends.
CO 4: The Art of Mixology like cocktails mixing methods, equipment, Accessories used.

B. Sc., Hotel Management	V	HM357TM	Tourism Management
By successful completion of the course, students will be able to; CO 1: To inculcate a sense of importance and establish a link between the tourism industry and the hotel industry. CO 2: To highlight the tourism industry as an alternative career path. CO 3: Acquire knowledge on the role & functions of tourism organizations. CO 4: Able to learn the procedure and operations of the Travel Agent and Tour operator.			

Program	Semester	Course Code	Course Name
B. Sc., Hotel Management	V	HM355CAM	AND AIR TICKETING MANAGEMENT
By successful completion of the course, students will be able to; CO 1: To understand meaning of Role of AAI and DGCA in air transportation CO 2: Learn about methods of Cargo transportation. CO 3: To understand the Airline Terminology and knowing types of journeys. CO 4: Finally learn the types of fares according to the Passengers.			

Program	Semester	Course Code	Course Name
B. Sc., Hotel Management	V	HM356SM	Sales and Marketing
By successful completion of the course, students will be able to; CO 1: The subject aims to make the students understand the importance of Sales and			

Program	Semester	Course Code	Course Name
Program	Semester	Course Code	Course Name
CO 3: The student will understand the concept of product, price, promotion, sales, and consumers behaviour.			

CHEMISTRY

Program	Semester	Course Code	Course Name
B. Sc MPC, BZC, MBC, MFC	II		Organic and physical Chemistry
At the end of the course, the student will be able to; CO 1: Comprehend atomic structure through quantum mechanical concepts, arrangement, and periodicity in properties of elements in the periodic table CO 2: Acquire knowledge related to the nature and elements promoting the synthesis of ionic compounds CO 3: Apply the theories of bonding to predict stable molecular structures CO 4: Describe various bond types and analyze its influence on the composition and properties of compounds and materials CO 5: Understand the concepts related to acids, bases, chemical reactions and non-aqueous solvents			

B. Sc MPC, BZC, MBC, MFC	II		Organic and physical Chemistry

At the end of the course, the student will be able to;
CO 1: Understand the basic concepts of 13-15 group elements & and draw the structures of simple boranes & silicones
CO 2: Predict and analyse the structures of inter halogen compounds & oxides, oxyacids of Sulphur.
CO 3: Explore the wide range of oxidation states exhibited by d-block elements & correlate electronic configurations to their unique properties, including color, magnetism, and catalytic behaviour
CO 4: Correlate periodic trends in f-block with its electronic configuration besides Distinguish lanthanides and actinides & comprehend the concept of Lanthanide contraction & its applications
CO 5: Assess the stability of nucleus by Fundamental factors like Mass defect, BE, BE per nucleon, Magic numbers etc., besides describing the importance of radioactivity & distinguish Nuclear Fission & Fusion

B. Sc **MPC, BZC, MBC, MFC**	**III**	**CHE233POC**	**Physical and Organic Chemistry**

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

CO 2: Importance of EMF measurements and its applications
CO 3: Study nitrogen containing function groups with respect to their reactivity
CO 4: Study synthesis and role of amino acids and Proteins.
CO 5: Study of structural elucidation of various mono and disaccharides.

Program	**Semester**	**Course Code**	**Course Name**
B. Sc **MPC, BZC, MBC, MFC**	**IV**	**CHE244IPC**	**Inorganic and Physical Chemistry**

At the end of the course students will be able to

CO 1: Understand the basic concepts of d-block elements
CO 2: Apply various theories of complex compounds
CO 3: Explain the difference between solid, liquid and gases
CO 4: Compute the order of a reaction.
CO 5: Interpret the defects in the crystals.

B. Sc MPC, BZC, MBC, MFC	V	CHE355OSC	Organic and Spectroscopy of Organic compounds

At the end of the course students will be able to:
CO 1: Learn basic concepts of bonding and symmetry.
CO 2: Correlate the reactivity of various Heterocyclic compounds.
CO 3: Acquire knowledge on synthesis of desired alcohols using Grignard reagents
CO 4: Interpret IR spectroscopic peaks for identifying functional groups
CO 5: Predict the number of proton NMR signals expected from a given compound.

Program	Semester	Course Code	Course Name
B. Sc **MPC, BZC, MBC, MFC**	**I**	**CHE111VA(P)**	**Volumetric Analysis**

At the end of the course student will be able to

CO 1: Understand the basic concepts of quantitative analysis
CO 2: Perform the techniques involved in volumetric analysis
CO 3: Understand the concepts and role of indicators used
CO 4: Acquire an idea about the significant figures and accuracy of reporting.
CO 5: Estimate the unknown present in the solution by suitable methods.

Program	Semester	Course Code	Course Name
B. Sc **MPC, BZC, MBC, MFC**	**II**	**CHE122MA(P)**	**Mixture analysis**

At the end of the course student will be able to;
CO 1 Understand the basic concepts of qualitative analysis of inorganic mixture
CO 2: Use glassware, equipment and chemicals and follow experimental procedures in the laboratory
CO 3: Apply the concepts of common ion effect, solubility product and concepts related to qualitative analysis

Program	Semester	Course Code	Course Name
B. Sc **MPC, BZC, MBC, MFC**	**III**	**CHE233AOC(P)**	**Analysis of Organic Compound**

At the end of the course student will be able to

CO 1: Perform systematic qualitative analysis of organic compound
CO 2: Detect extra elements using Lassaigne's test
CO 3: Identify the functional group of the compound
CO 4: Analyse various organic compounds using documented procedures
CO 5: Identify organic compound by determination of melting point

Program	Semester	Course Code	Course Name

B. Sc MPC, BZC, MBC, MFC	IV	244	Analytical Skills
At the end of the course student will be able to CO 1: Understand the basic concepts of qualitative analysis of inorganic mixture CO 2: Use glassware, equipment and chemicals and follow experimental procedures in the laboratory CO 3: Apply the concepts of common ion effect, solubility product and concepts related to qualitative analysis CO 4: Analyse various salt mixtures using documented procedures.			
Program	**Semester**	**Course Code**	**Course Name**
B. Sc MPC, BZC, MBC, MFC	V	CHE355PI(P)	Physical and Instrumentation
At the end of the course student will be able to CO 1: Determine the rate constant of acid catalysed ester hydrolysis CO 2: Prove 1 st order kinetics of decomposition of hydrogen peroxide CO 3: Determine the partition coefficient of benzoic acid distributed between benzene and water CO 4: Find the viscosity of unknown composition of glycerol and water mixture CO 5: Study the effect of electrolyte on CST of phenol + water system.			

Program	**Semester**	**Course Code**	**Course Name**
B. Sc **MPC, BZC, MBC, MFC**	**V**	**CHE355OSC**	**Organic and Spectroscopy of Organic compounds**
At the end of the course students will be able to: CO 1: Learn basic concepts of bonding and symmetry. CO 2: Correlate the reactivity of various Heterocyclic compounds. CO 3: Acquire knowledge on synthesis of desired alcohols using Grignard reagents CO 4: Interpret IR spectroscopic peaks for identifying functional groups CO 5: Predict the number of proton NMR signals expected from a given compound.			

MBA

Program	**Semester**	**Course Code**	**Course Name**
MBA	I	MBA101	Managing People and Organisations
COURSE OUTCOMES: On successful completion of the course, students will be able to: CO1: Comprehend and apply the principal concepts of the field of management at the individual, group, and organizational levels of analysis and identify how these concepts affect organizational and individual performance. CO2: Recognize the relationship of the basic human resource functions to managerial roles and responsibilities. CO3: Manage organizational culture and conflict in organizations, and how to manage sustainability and effectiveness of organizations.			

Program	Semester	Course Code	Course Name
MBA	I	MBA102	Managerial Economics

COURSE OUTCOMES: On successful completion of the course, students will be able to:
CO1: To introduce the fundamentals, tools, and theories of managerial economics
CO2: To orient on micro economic techniques as a decision-making process
CO3: To understand macro-economic analysis essential for business managers.

Program	Semester	Course Code	Course Name
MBA	I	MBA103	Quantitative Analysis for Business Decisions

COURSE OUTCOMES: On successful completion of the course, students will be able to:
CO1: Understand a Problem(s) in Business. Explore and analyze the problem(s)
CO2: To improve policy making to develop strategy and improve day to day performance of organizations.
CO3: Explore data to find new patterns and relationships (Data Mining)
CO4: Predict the relationship between different variables CO5: Estimate the value created using business analytics to address an opportunity/Problem. Understand and use statistical techniques for analysis of research data.

Program	Semester	Course Code	Course Name
MBA	I	MBA104	Business, Government & Society

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand the challenges and complexities faced by businesses and their leaders as they endeavour to maximize returns while responsibly managing their duties to all stake holders of business.
CO2: Understand the rationale for government interventions in market systems
CO3: Understand and appreciate the social aspects of business
CO4: Develop Social Responsibility and make their own judgments as to the proper balance of attention to multiple bottom lines.
CO5: Develop the skills needed to work through ethical dilemmas in a globalized economic era.

Program	Semester	Course Code	Course Name
MBA	I	MBA105	Managerial Communication

COURSE OUTCOMES: On successful completion of the course, students will be able to:
CO1: Understand communication skills and sensitize them to their potential to become successful managers
CO2: Explain the various types of communication in Business Organizations
CO3: Identify the role of communication conflict in intercultural relationships.

Program	Semester	Course Code	Course Name
MBA	I	MBA106	Accounting for Managers

COURSE OUTCOMES: On successful completion of the course, students will be able to:
CO1: Explain fundamental accounting concepts, the elements of financial statements, and basic accounting vocabulary.
CO2: Explain and use the accounting equation in basic financial analysis and explain how the equation is related to the financial statements.
CO3: Explain and use the financial reporting and auditing procedures.
CO4: Explain and use various cost management techniques.

Program	Semester	Course Code	Course Name
MBA	I	MBA107	Legal Framework for Business

COURSE OUTCOMES: On successful completion of the course, students will be able to:
CO1: enable students understand the legal framework of business.

Program	Semester	Course Code	Course Name
MBA	I	MBA108	Foundation Course

COURSE OUTCOMES: On successful completion of the course, students will be able to:
CO1: To acquaint students with fundamentals of accounting, mathematics, computers, economics, and business and help them to transform their communication abilities.
CO2: To help students to acquire some of the necessary skills to handle day-to-day managerial responsibilities, such as making speeches, controlling one to one communication, enriching group activities and processes, giving effective presentations, writing letters, memos, reports, advertising, and maintaining one's poise in public and in private.
CO3: To build the students' confidence and to enhance competitiveness by project in a positive Image of themselves and of their future.

Program	Semester	Course Code	Course Name
MBA	I	MBA109	Emotional Intelligence and Managerial Effectiveness

COURSE OUTCOMES: On successful completion of the course, students will be able to:
CO1: To enlighten students to the ideation, concept, and application of emotional intelligence.
CO2: To examine how our soul prevail over our minds for innovative establishment.
CO3: It will however deal with how fundamentals of test anxiety handbook us through diverse situations of social lives.
CO4: Get to recognize about the many unknowable of existence, will further certainly assist them to boost their appreciation to still be beneficial on their responsibilities.
CO5: Learn and offer insight into self-regulation and revelation of one's maximum prospects for higher performance.
CO6: To encourage emotional maturity in entity for obtaining health, pleasure, and optimum efficiency at employment.

Program	Semester	Course Code	Course Name
MBA	II	MBA201	Marketing Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand the role of Marketing in underpinning the Success of the Organization

CO2: Understand the various types of marketing environments

CO3: Understand the role of Marketing mix elements in the success of marketing strategies

CO4: Know new product development and consumer adoption of the same

CO5: Various pricing methods and techniques followed in marketing of products and Services

CO6: Know the effective and Efficient Channel management.

Program	Semester	Course Code	Course Name
MBA	II	MBA202	Human Resource Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: To develop a meaningful understanding of HRM theory, functions, and practices;

CO2: To apply HRM concepts and skills across various types of organizations.

Program	Semester	Course Code	Course Name
MBA	II	MBA203	Financial Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: explain the basic functions and responsibilities of a financial department in a business/ firm;

CO2: elaborate the key decision areas in financial management-investment, financing, dividend and working capital management;

CO3: explain the various techniques of evaluation of investment proposals;

CO4: Discuss the various factors to be considered in designing the target capital structure.

Program	Semester	Course Code	Course Name
MBA	II	MBA204	Operations Research

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Gain knowledge of formulating mathematical models for quantitative analysis of managerial problems in industry so that they are able to use resources (capitals, materials, staffing, and machines) more effectively.

CO2: Improve skills in the use of various mathematical models with Operations Research approach in solving real problems in industry and thereby facilitates the managerial decision-making process.

CO3: understand operations research concepts that yield a competitive advantage through operational excellence.

Program	Semester	Course Code	Course Name
MBA	II	MBA205	Entrepreneurship Theory and Practice

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Recognize and understand the concept of entrepreneurship and the types and characteristics of small businesses

CO2: Recognize and recall the psychological theories of entrepreneurship and analyze how entrepreneurs acquire resources and persuade others to invest in their novel venture.

CO3: Identify the various environmental factors, external to the individual, which can influence the extent of entrepreneurship in society

CO4: Outline how entrepreneurship connects to innovation in small firms and new ventures.

Program	Semester	Course Code	Course Name
MBA	II	MBA206	Business Research Methods

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: learn the basic concepts of research and formulate research problems and process.

CO2: develop an awareness of research design and data collection methods.

CO3: generate and understand of sampling design and techniques.

CO4: know how to analyse and interpret the data.

CO5: give knowledge about to write a research report and thesis.

Program	Semester	Course Code	Course Name
MBA	II	MBA207	Project Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand the basic concepts of project management

CO2: gain knowledge about Network analysis and techniques.

Program	Semester	Course Code	Course Name
MBA	II	MBA208	Critical thinking and Problem Solving

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand the dynamics of the external world

CO2: understand various issues in general to the outside world and Develop empathy.

Program	Semester	Course Code	Course Name
MBA	III	MBA301	Strategic Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand the core concepts of Strategic Management

CO2: provide an understanding of how strategic decisions are to be taken and implemented in the changing environment scenario.

Program	Semester	Course Code	Course Name
MBA	III	MBA302HRMOB	Human Resource Planning

COURSE OUTCOMES On successful completion of the course, students will be able to:

CO1: create a critical appreciation and knowledge for understanding the determinants of human resource requirements in the organization

CO2: develop conceptual as well as practical understanding of human resource planning, deployment, maintaining HR information, preparing report on HR performance.

Program	Semester	Course Code	Course Name
MBA	III	MBA304HRMOB	Training and development

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: learn the concept and practice of training and development in the modern organizational setting through the pedagogy of case discussions and recent experiences.

CO2: To gain an experimental skill-based exposure to the process of planning, organizing, and implementing of training program in a globalised organization.

CO3: understand the role of training in the development process of an employee and also to educate the employee about career objectives and career planning.

Program	Semester	Course Code	Course Name
MBA	III	MBA306HRMOB	Industrial Relations and Employment Laws

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: to grasp and apply the principles of IR and develop an awareness of the significance of

industrial peace CO2: to give an understanding of the components and meaning of sustaining Industrial peace anchored on harmonious Employee-Management relations.			
Program	**Semester**	**Course Code**	**Course Name**
MBA	III	MBA302FIN	Financial Institutions &Markets
COURSE OUTCOMES: On successful completion of the course, students will be able to: CO1: familiarize with the financial institutions, markets and its regulations. CO2: acquire analytical skills in the market analysis in the context of raising medium and long term funds. CO3: understand the behavior of banks and other financial firms.			
Program	**Semester**	**Course Code**	**Course Name**
MBA	III	MBA304FIN	Security Analysis and Portfolio Management
COURSE OUTCOMES: On successful completion of the course, students will be able to: CO1: Understand an overview of investment management, focusing on the application of finance theory to the issue faced by portfolio managers and investors in general.			
Program	**Semester**	**Course Code**	**Course Name**
MBA	III	MBA305FIN	Investment Management and Commercial Banking
COURSE OUTCOMES: On successful completion of the course, students will be able to: CO1: identify and describe terms and concepts associated with investments Describe and discuss various investment opportunities Differentiate between short-term and long-term investments CO2: Demonstrate knowledge of corporate rational for the issuance of corporate stocks and bonds Describe and discuss the basic concepts of the stock, bond, and mutual fund markets CO3: Describe and discuss the real estate market and the advantages and disadvantages of real estate in an investment portfolio CO4: Understand the different types of banking, different banking products/activities to understand the main components of commercial and investment banking business.			
Program	**Semester**	**Course Code**	**Course Name**
MBA	III	MBA302MKT	Consumer Behaviour and Marketing

			Research

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: To understand the concept of consumer behavior, decision making by consumers, behavior variables and influences on consumer behavior.

CO2: To comprehend the social and cultural dimensions of consumer behavior, factors impacting attitudes and behavior.

CO3: To arm the budding marketers with an insight of the psychological and behavioural concepts of consumers thus enabling them to achieve their objectives and excel.

Program	**Semester**	**Course Code**	**Course Name**
MBA	III	MBA304MKT	Advertisement Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand how to develop advertising objectives, formulate a creative strategy and design a set of creative tactics for advertising that will best achieve your communication objectives

CO2: To analyze critically the task of advertising under contemporary conditions and to examine the role of advertising as it relates to other marketing functions.

CO3: To evaluate the various types of policies that can be employed in guiding the advertising activity

CO4: To develop an awareness of the major types of advertising problems faced by organizations with emphasis on the application of marketing concepts for effective decision making.

Program	**Semester**	**Course Code**	**Course Name**
MBA	III	MBA305MKT	Services Marketing

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Explain the unique challenges of services marketing, including the elements of product, price, place, promotion, processes, physical evidence, and people.

CO2: Describe how customer relationship marketing (CRM), including retention strategies, creates an environment that achieves excellence in customer service.

CO3: Design service quality measurements to build customer loyalty and evaluate the effectiveness and efficiency of customer service offerings.

CO4: Explain service blueprinting, the integration of new technologies, and other key issues facing today's customer service providers and service managers.

CO5: Discuss the influences of the multicultural marketplace, business ethics, and socially responsible marketing on services marketing.

Program	Semester	Course Code	Course Name
MBA	III	MBA308	Leadership

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: to understand their leadership journeys and their crucibles by reflecting upon and framing their life stories and experiences to date.

CO2: to understand why leaders lose their way and the self-awareness needed to avoid derailment

CO3: gain clarity about their leadership principles, values, and ethical boundaries, and how they will respond under pressure when challenged.

CO4: can explore how to build support teams and lead an integrated life

CO5: create personal leadership development plans to guide them throughout their lives.

Program	Semester	Course Code	Course Name
MBA	IV	MBA401	International Business

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand how political, economic, and legal systems collectively influence a country's ability to achieve meaningful economic progress.

CO2: Discuss how culture is different because of differences in social structure, religion, language, education, economic philosophy, and political philosophy.

CO3: Explain the important implications that international trade theory holds for business practice.

CO4: Reason why some governments intervene in international trade to restrict imports and promote exports.

CO5: Describe the need and prospects of the world's most important regional economic agreements.

CO6: Demonstrate how currency exchange rates are determined.

CO7: Assess the role played by the International Monetary Fund and the World Bank in the global monetary system.

CO8: Interpret the three basic decisions that a firm contemplating in international business expansion must make: which markets to enter, when to enter, and on what scale.

CO9: Describe the different approaches to business ethics that can be derived from moral philosophy, and show how these approaches can help managers to make international business decisions that do not violate ethical norms.

Program	Semester	Course Code	Course Name

MBA	IV	MBA402HRMOB	Human Resource Development

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: get awareness of the concepts, techniques, and practices of human resource development.

CO2: apply the principles and techniques as professionals for developing human resources in an organization.

Program	**Semester**	**Course Code**	**Course Name**
MBA	IV	MBA404HRMOB	Strategic Human Resource Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: understand Strategic HRM

CO2: align HR systems with business strategy, Strategy formulation, Strategies for performance and development with knowledge of global economy factors.

Program	**Semester**	**Course Code**	**Course Name**
MBA	IV	MBA405HRMOB	International Human Resource Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: gain an understanding on International HRM, Basics of IHRM

CO2: understand functional Aspects of IHRM, IHRM Practices in Selected Countries, and Special Issues in IHRM.

Program	**Semester**	**Course Code**	**Course Name**
MBA	IV	MBA403MKT	Sales and Distribution Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Understand the concept of sales and distribution management and their interrelationship

CO2: Explain role and responsibility of sales personal, and essential selling skills

CO3: Understand the concept and effect of sales organization and sales effort

CO4: Explain the skills and methods required for sales force management

CO5: Understand the Management of Marketing Channels

CO6: Explore the concept and theories of rural distribution

CO7: Explain the concept of retailing

CO8: Understand the process of marketing logistics.

Program	**Semester**	**Course Code**	**Course Name**
MBA	IV	MBA404MKT	Retail Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: develop an understanding of the contemporary retail management, issues, strategies, and trends in Retailing

CO2: highlight the significance of retailing and its role in the success of modern business houses

CO3: acclimatize with the insights of retailing, key activities and relationships.

Program	**Semester**	**Course Code**	**Course Name**
MBA	IV	MBA406MKT	E-Marketing

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: understand the important concepts related to e-marketing

CO2: learn the use of different electronic media for constructing marketing activities

CO3: know the current tools in e-marketing space.

Program	**Semester**	**Course Code**	**Course Name**
MBA	IV	MBA403FIN	Financial Derivatives

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: get awareness about the importance of commodities market, meaning, scope and types of derivatives

CO2: understand the operational mechanism and the various hedging options to avoid/minimize the risks involved in investment.

Program	**Semester**	**Course Code**	**Course Name**
MBA	IV	MBA404FIN	Global Finance

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: Get awareness among the students about the importance of international financial

management, international financial markets

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international portfolio management and international working capital management.

CO3: understand financial management at international scenario and also about various hedging options to manage the exposure.

Program	Semester	Course Code	Course Name
MBA	IV	MBA406FIN	Strategic Cost Management

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: understand the costing systems and their application in different manufacturing environments

CO2: Identify the conventions and doctrines of managerial and cost accounting and other generally accepted principles which may be applied in the contemporary cost management models

CO3: Identify major contemporary issues that have emerged in managerial accounting

CO4: discuss a number of issues relating to the design and implementation of cost management models in modern firms.

Program	Semester	Course Code	Course Name
MBA	IV	MBA409	Employability Skills

COURSE OUTCOMES: On successful completion of the course, students will be able to:

CO1: develop non-technical skills and competencies that has always been an important part of effective and successful participation in the workplace.

CO2: Get employment by honing their skills to meet the demands of today's world.

enhance performance.

Program	Semester	Course Code	Course Name
MCA	I	20MCA101	Discrete mathematics structures

All the end of the course student will able to :

CO1: use logical notation and mathematical induction for solving problems.

CO2: apply permutations and combinations for solving combinatorial problems

CO3: apply the concepts of linear homogeneous and non-homogeneous recurrence relations

CO4: know the properties of relations. Use different types of graphs to solve problems.

Program	Semester	Course Code	Course Name
MCA	I	20MCA102	Database management system

All the end of the course student will able to:

CO1: describe the concepts of data storage and indexing, transaction

CO2: management, query evaluations and optimization techniques.

CO3: list the importance of dbms and differentiate how dbms is better than traditional file processing systems.

CO4: analyze the basic structure of database and recognize the different views of the data base.

CO5: formulate data retrieval queries in SQL for real time scenario.

CO6: construct and normalize conceptual data models

CO7: handle the dead locks that occurs in the system.

Program	Semester	Course Code	Course Name
MCA	I	20MCA103	Programming and problem-solving using python

At the end of the course student will able to:

CO1: define and demonstrate the use of built-in data structures “lists” and “dictionary”.

CO2: design and implement a program to solve a real-world problem.

CO3: design and implement gui application and how to handle exceptions and files.

CO4: make database connectivity in python programming language.

Program	Semester	Course Code	Course Name
MCA	I	20MCA104	Java

At the end of the course student will able to:

CO1: the model of object oriented programming and fundamental features of an object-oriented language.

CO2: how to test, document and prepare a professional looking package for each business project.

CO3: student have the ability to write a computer program to solve specified problems and to use the java sdk environment to create, debug and run simple java programs.

CO4: student will be able to explain and develop programs for inheritance, multithreading, applets, exception handling and file handling.

Program	**Semester**	**Course Code**	**Course Name**
MCA	I	20MCA105	Operating systems

At the end of the course student will able to :

CO1: apply optimization techniques for the improvement of system performance.

CO2: ability to understand the synchronous and synchronous communication mechanisms in their respective os.

CO3: learn about minimization of turnaround time, waiting time and response time and also maximization of through put with keeping CPU as busy as possible.

CO4: ability to compare the different os

Program	**Semester**	**Course Code**	**Course Name**
MCA	I	20MCA106	Computer organization

At the end of the course student will able to:

CO1: ability to understand basic structure of computer

CO2: ability to perform computer arithmetic operations

CO3: ability to understand control unit operations.

CO4: ability to design memory organization that uses banks for different word size operations.

CO5: ability to understand the concept of cache mapping techniques.

CO6: ability to understand the concept of i/o organization

CO7: ability to conceptualize instruction level parallelism.

Program	**Semester**	**Course Code**	**Course Name**
MCA	I	20MCA107	Programming and problem-solving using python

At the end of the course student will able to:

CO1: understand and comprehend the basics of python programming.

CO2: demonstrate the principles of structured programming and be able to describe, design, implement, and test structured programs using currently accepted methodology.

CO3: explain the use of the built-in data structure list, sets, tuples and diction nary.

CO4: make use of functions and its applications.

CO5: identify real-world applications using oops, files and exception handling provided by python.

Program	**Semester**	**Course Code**	**Course Name**
MCA	I	20MCA108	DBMS lab

At the end of the course student will able to:

CO1: describe the concepts of data storage and indexing, transactions

CO2: management, query evaluations and optimization techniques

CO3: list the importance of dbms and differentiate how dbms is better than rational file processing systems

CO4: analyze the basic structure of data base and recognize the different views of data base

CO5: formulate data retrieval queries in SQL for real time scenario

CO6: construct and normalize conceptual data models

CO7: handle the dead locks that occurs in the system

CO8.list the differences between relational data bases and a non-relational (no-SQL).

CO9: use an information model into a relational data base schema and to use a data definition language and/or utilities to implement the schema using a dbms

CO10: use an SQL interface of a multi user relational dbms package to create, secure, populate, maintain, and query a data base

CO11: formulate query, using SQL, solutions to a broad range of query and data update problems

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA201	Design and analysis of algorithms

At the end of the course student will able to:

CO1: analyze the asymptotic performance of algorithms.

CO2: write rigorous correctness proofs for algorithms.

CO3: demonstrate a familiarity with major algorithms and data structures.

CO4: apply important algorithmic design paradigms and methods of analysis.

CO5: synthesize efficient algorithms in common engineering design situations.

CO6: algorithm design and analysis provide the theoretical backbone of computer science and are a must in the daily work of the successful programmer. The goal of this course is to provide a solid background in the design and analysis of the major classes of algorithms.

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA202	Software engineering

At the end of the course student will able to:

CO1: how to apply the software engineering lifecycle by demonstrating competence in communication, planning, analysis, design, construction, and deployment

CO2: an ability to work in one or more significant application domains

CO3: work as an individual and as part of a multidisciplinary team to develop and deliver quality software

CO4: demonstrate an understanding of and apply current theories, models, and techniques that provide a basis for the software lifecycle

CO5: demonstrate an ability to use the techniques and tools necessary for engineering practice

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA203	Data structure

At the end of the course student will able to:

CO1: analyze the complexities for recursive and non-recursive algorithms.

CO2: apply adt concepts such as arrays, stacks, and queues for solving infix to post fix, postfix evaluation, priority queues.

CO3: apply the concepts of dynamic memory allocation for reducing the time and space complexity of algorithms.

CO4: implement linear, binary, interpolation, hashing searching techniques and sorting techniques namely bubble, insertion, selection, quick, merge sort.

CO5: design and implement the no linear data structures (trees and graphs) to optimize the solution.

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA204	Computer network

At the end of the course student will able to:

CO1: ability to set up install and configure networks

CO2: ability to do network programming

CO3: ability to use network protocols efficiently

CO4: it facilitates communications from one computer to another computer.

CO5: it allows the exchange of data and information among users through a network.

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA205	Web technologies

At the end of the course student will able to:

CO1: explain different components and technologies of world wide web as a platform.

CO2: design and develop websites using fundamental web languages, technologies, and tools.

CO3: distinguish between server-side and client-side web technologies.

CO4: describe various web technology and application development issues and trends.

CO5: conduct independent research on a subject related to the course material.

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA206	Research methodology - I

At the end of the course student will able to:

CO1: explain key research concepts and issues.

CO2: read, comprehend, and explain research articles in their academic discipline.

CO3: propose the required numerical skills necessary to carry out research.

CO4: assess the basic function and working of analytical instruments used in research.

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA207	Web technologies lab

CO1: introduction to object-oriented programming concepts- java as an object-oriented programming language. Introduction to java application and applets control structures methods-arrays.

CO2: object based and object-oriented programming creating packages-using overloaded constructors-static class variables-data abstraction and information hiding-relation between super class objects and subclass objects composition verses inheritance polymorphism-dynamic method binding abstract super classes and concrete super classes –inheriting

interface-use of inner classes and wrapper classes-string to kenizer and string suffer classes.

CO3: role of object-oriented programming in designing Gui –graphs and java20overview of swing- event handling, adapter classes and layout managers. Advance Gui components- j pop up menus- j desktop pane- advance layout managers.

CO4: exception handling and multithreading in object-oriented programming- when exception handling should be used-java exception handling – exceptions and inheritance-multithreading in java-thread synchronization-daemon threads runnable interface- files and streams in java

CO5: network and database handling through object-oriented programming –using josc – processing queries-overview of servlet –introduction to networking – establishing a simple server and a client – introduction to rmi – implementing the remote interface.

Program	**Semester**	**Course Code**	**Course Name**
MCA	II	20MCA208	Data structure lab

At the end of the course student will able to:

CO1: engineering knowledge: apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

CO2: problem analysis: identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

CO3: design / development of solutions: design solutions for complex engineering 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.

CO4: conduct investigations of complex problems: use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

CO5: modern tool usage: create, select, and apply appropriate techniques, resources, and modern engineering and it tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

Program	**Semester**	**Course Code**	**Course Name**
MCA	III	20MCA301	Big data analytics

At the end of the course student will able to:

CO1: after successful completion of this course, student will be able to

CO2: apply mathematical principles to the analysis of data

CO3: analyse very large data sets in the context of real-world problems

CO4: develop and implement data analysis strategies base on theoretical principles, ethical

considerations, and detailed knowledge of the underlying data

CO5: demonstrate an ability to articulate, assess and apply appropriate theories and principles of information management

CO6: demonstrate presentation proficiency for written, oral and visual communications in the contest of traditional and digital forms of communication

Program	**Semester**	**Course Code**	**Course Name**
MCA	III	20MCA302	Mobile computing

At the end of the course student will able to:

CO1: understand fundamentals of wireless communications.

CO2: analyze security, energy efficiency, mobility, scalability, and their unique characteristics in wireless networks.

CO3: demonstrate basic skills for cellular networks design.

CO4: apply knowledge of tcp/ip extensions for mobile and wireless networking.

Program	**Semester**	**Course Code**	**Course Name**
MCA	III	20MCA303	Artificial intelligences

At the end of the course student will able to:

CO1: understanding of the major areas and challenges of ai.

CO2: ability to apply basic ai algorithms to solve problems.

CO3: understanding of ethical issues in ai.

CO4: understand the various searching techniques, constraint satisfaction problem and example problems- game playing techniques.

CO5: apply these techniques in applications which involve perception, reasoning and learning.

CO6: explain the role of agents and how it is related to environment and the way of evaluating it and how agents can act by establishing goals.

CO7: acquire the knowledge of real-world knowledge representation.

Program	**Semester**	**Course Code**	**Course Name**
MCA	III	20MCA304	Internet of things

At the end of the course student will able to:

CO1: understand the application areas of iot

CO2: realize the revolution of internet in mobile devices, cloud & sensor networks

CO3: understand building blocks of internet of things and characteristics

CO4: identify the components that forms part of iot architecture

CO5: determine the most appropriate iot devices and sensors based on case studies.

CO6: setup the connections between the devices and sensors evaluate the appropriate protocol for communication between iot.

CO7: analyze the communication protocols for iot

Program	**Semester**	**Course Code**	**Course Name**
MCA	III	20MCA305	Software testing and fault analysis

At the end of the course student will able to

CO1: after the successful completion of the course the students will be able to:

CO2: various test processes and continuous quality improvement

CO3: types of errors and fault models

CO4: methods of test generation from requirements

CO5: behaviours modelling using uml: finite state machines (fsm)

CO6: test adequacy assessment using: control flow, data flow, and program mutations

CO7: the use of various test tools

CO8: application of software testing techniques in commercial environments.

Program	**Semester**	**Course Code**	**Course Name**
MCA	III	20MCA306	Research methodology – II

At the end of the course student will able to:

CO1: know how to sample the data, sample size and to find out errors in sampling

CO2: know the data collection techniques

CO3: have basic knowledge on measurement and scaling techniques

CO4: develop a hypothesis testing

CO5: gain experience with writing the research paper research methodology

CO6: gain experience with research report writing final paper presentation

Program	**Semester**	**Course Code**	**Course Name**
MCA	III	20MCA307	Bigdata analytics using R programming lab

At the end of the course student will able to:

CO1: Ability to understand installation of Hadoop.

CO2.understanding Hadoop frame work.

CO3: ability to work on map reduce.

CO4: analyze large amount of data sets using Apache pig. 5.ability to write commands using pig Latin.

Program	Semester	Course Code	Course Name
MCA	III	20MCA308	Technical report writing lab and mini project

At the end of course student will able to:

CO1: recognize and analyze an appropriate spectator for a variety of technical and scientific documents.

CO2: communicate in ethical ways that demonstrate sensitivity to the global and scientific audience of a lab report.

CO3: analyze and compose effective scientific lab reports and understand the key components of such reports.

CO4: prepare technical documents that demonstrate clear mastery of professional language, grammar.

CO5: ability to develop logical thinking and technical skills while working on mini projects. List of experiments

Program	Semester	Course Code	Course Name
MCA	IV	20MCA403	Android apllication developemnt

At the end of course student will able to:

CO1: understand the requirements of mobile programming environment

CO2: learn about basic methods, tools and techniques for developing apps

CO3: explore and practice app development on android platform

CO4: develop working prototypes of working systems for various uses in daily lives

Program	Semester	Course Code	Course Name
MCA	IV	20MCA404	Distributed computing

At the end of the course student will able to;

CO1: in distributed systems this course, you will learn a range of fundamental and applied

techniques in distributed systems. The learning objectives for distributed systems are:

CO2: apply knowledge of distributed systems techniques and methodologies.

CO3: explain the design and development of distributed systems and distributed systems applications.

CO4: use the application of fundamental computer science methods and algorithms in the development of distributed systems and distributed systems applications.

CO5: discuss the design and testing of a large software system, and to be able to communicate that design to others

Program	**Semester**	**Course Code**	**Course Name**
MCA	IV	20MCA405	Software project management

At the end of the course student will able to:

CO1: develop the model from the conventional software product to the modern.

CO2: analyze and design the software architecture.

CO3: have an exposure for organizing and managing a software project.

CO4: apply, analyze, design, and develop the software project.

CO5: design various estimation levels of cost and effort.

CO6: acquire the knowledge of managing, economics for conventional, modern, and future software projects.

CO7: categorize various peer instruction levels.

CO8: sketch various artifacts sets for better understanding of software development.