Programme Outcomes

- Domain Knowledge
- Communicative Competence
- Applying Modern Technologies
- Reflective response to Ethical and Social Issues
- Sustainability Values
- Critical Thinking and Problem-Solving
- Entrepreneurship
- Team Work and Leadership
- Self-Directed and Lifelong Learning

Programme Specific Outcomes

1. **B.Sc. Botany (Hons)**
    a. Explain key concepts and processes in thrust areas of plant science, leading to environmental sustainability
    b. Analyse and interpret various aspects of plant biology in both theoretical and practical contexts
    c. Develop critical thinking skills necessary for evaluating scientific evidence, analysing complex problems, and generating innovative solutions
    d. Evaluate the ecological significance of plants and their role in ecosystem functioning and global environmental processes
    e. Inculcate conservation efforts and sustainable management practices aimed at preserving plant biodiversity and ecosystem services for human welfare
    f. Employ botanical knowledge and scientific reasoning to address challenges in agriculture, conservation, biotechnology, and other areas related to plant science
2. **B.Sc. Chemistry (Hons)**
    a. Domain Knowledge: Upon completion of the Chemistry program, students will demonstrate a deep understanding of fundamental principles and advanced concepts in various branches of chemistry, including organic, inorganic, physical, and analytical chemistry. They will exhibit proficiency in applying this knowledge to analyse and solve complex problems in the field.
    b. Experimental Skills: Graduates will possess strong experimental skills, including the ability to design and conduct experiments, analyse data using modern techniques and instruments, and draw meaningful conclusions. They will be adept at handling laboratory equipment safely and efficiently, ensuring precision and accuracy in their experimental work.
    c. Critical Thinking: Students will develop critical thinking skills, enabling them to evaluate scientific literature, assess experimental results, and formulate well-reasoned conclusions. They will demonstrate the ability to analyse and synthesize information, identify gaps in knowledge, and propose innovative solutions to scientific challenges.
    d. Research Skills: Upon completion of the program, students will have acquired advanced research skills, including the ability to formulate research questions, design experiments, and carry out independent research projects. They will be proficient in literature review, data interpretation, and effective communication of research findings through oral and written presentations.
    e. Entrepreneurship: Graduates will be equipped with an entrepreneurial mindset, capable of applying their chemical knowledge to identify opportunities for innovation and the development of new products or processes. They will understand the economic and business

aspects of the chemical industry and be prepared to contribute to the growth of the industry through entrepreneurial initiatives.

f. Environment: Students will develop an awareness of environmental issues related to chemical processes and products. They will be capable of applying green and sustainable practices in their work, minimizing the environmental impact of chemical processes. Graduates will also be well-versed in ethical considerations and safety practices to ensure responsible and sustainable contributions to the chemical field.

3. B. Com (Hons)

a. Apply statistical accounting principles and financial management techniques to analyse and interpret financial data for enabling effective decision-making in diverse business contexts.
b. Integrate knowledge of diverse business forms, regulations, ethical standards and legal frameworks to develop practical strategies for establishing and managing business entities, thus demonstrating entrepreneurial talents and expertise for innovation and growth.
c. Utilize digital technologies and business analytics tools, such as MS Excel, Tableau, Power BI, and EViews, to extract meaningful insights and support data-driven decision making in various business domains.
d. Demonstrate leadership and communication skills in managing teams, conducting research, and presenting complex financial and business information to diverse audiences.
e. Continuously update knowledge and skills in the field of Commerce/Interdisciplinary studies by engaging in lifelong learning, seeking professional development opportunities, and utilizing research methodologies effectively.
f. Employ quantitative and qualitative research techniques to conduct empirical research, analyse data, and draw evidence-based conclusions.

4. BA Economics (Hons)

a. Integrate the basic concepts of different streams to be applied in Economics.
b. Demonstrate the ability to use computational techniques using different statistical packages and enable them to contribute to academic and industrial research.
c. Develop scientific temper among the students to build critical thinking and problem-solving to make decisions in real life situations by complying with the ethical and legal standards of the nation.
d. Demonstrate communication and life skill competencies necessary to succeed impersonal and professional life.
e. Validate the economic theories and evaluate the economic policies to assess its impact on the macro and micro level.
f. Build a commitment to lifelong learning by cultivating the skills, methodologies and attitudes necessary to adapt to evolving economic scenarios.

5. BA English (Hons)

a. B.A programme in English Language and Literature offers an effective curriculum with broad objectives of developing communicative competence and enhancing intellectual and aesthetic abilities of the learner.
b. Apply listening, speaking, writing and reading skills in formal and informal situations in a precise and effective manner.
c. Understand and appreciate various genres of literature
d. Create discussions about the various societal and environmental issues
e. Identify the evolution of the history of literature through the ages and the major literary canon
f. Effectively use research skills in academic writing and projects

6. BA Malayalam (Hons)

a. സാഹിത്യപരിചയം, വായനാഭിരുചി, ആസ്വാദനശേഷി എന്നിവ വളർത്തിയെടുക്കുക
b. മലയാളസാഹിത്യത്തിലെ ഭാവുകത്വപരിണാമങ്ങൾ തിരിച്ചറിയുന്നതിനും സർഗാത്മക രചനകൾ നിർവഹിക്കുന്നതിനും പ്രാപ്തരാക്കുക.
c. സാങ്കേതികവിദ്യയിലൂന്നിയ മലയാളഭാഷാപഠനംവഴി പുതിയ തൊഴിൽസാധ്യതകൾക്ക് നൈപുണി നേടുക.
d. തെറ്റില്ലാതെ ഭാഷ പ്രയോഗിക്കാനുള്ള കഴിവു നേടുക. വിവിധ മാധ്യമങ്ങൾക്ക് ഉതകുന്ന ഉള്ളടക്ക രൂപീകരണത്തിന് ശേഷി നേടുക
e. സാഹിത്യപഠനത്തിലൂടെ പാരിസ്ഥിതികാവബോധവും സാമൂഹികനീതിബോധവും കൈവരിക്കുക.
f. കേരളസമൂഹത്തെയും സംസ്കാരത്തെയും സംബന്ധിച്ച അവബോധം രൂപപ്പെടുത്തുക.

7. B.Sc. Mathematics (Hons)

a. Develop a solid understanding of fundamental mathematical concepts.
b. Demonstrate proficiency in mathematical reasoning and logical thinking.
c. Acquire basic programming skills and knowledge about modern technologies relevant to mathematics.
d. Apply mathematical principles to formulate mathematical models and solve real-world problems across various disciplines.
e. Develop effective communication skills to convey mathematical ideas clearly.
f. Equipped to enter the workforce in various fields such as finance, data analysis, education, or research or pursue advanced studies in mathematics.

8. B.Sc. Physics (Hons)

a. Acquire a strong foundation in fundamental principles and theories of Physics.
b. Gain proficiency in advanced experimental techniques, including the design and execution of complex experiments, data analysis, and the use of sophisticated laboratory equipment.
c. Apply mathematical tools and problem-solving skills to analyse and solve complex physical problems.
d. Apply technological advancements by staying updated with current trends in applied physics.
e. Extend knowledge and expertise to the community through effective outreach initiatives within diverse audiences.
f. Perform basic, applied and collaborative research in Physics and related fields.

9. B.Sc. Zoology (Hons)

a. Explain the diversity of animal life, life processes and ecological interactions, recognizing their importance for human wellbeing and sustainable development.
b. Design and implement zoological experiments, analysis, and field studies, equipping students with teamwork skills.
c. Develop proficiency in effectively communicating scientific concepts, both verbally and in writing, through scientific reports, presentations and publications.
d. Apply interdisciplinary zoological principles to advance knowledge, technology, and address global challenges, while evaluating ethical, socio-economic, and environmental implications.
e. Integrate indigenous biodiversity knowledge, Ayurveda insights, ethical considerations, and interdisciplinary exploration of life sciences to promote conservation rooted in Indian ecology
f. Produce the knowledge, skills and competencies necessary for success in various careers and further academic pursuits within the field of biology and related disciplines.

10. B.Sc. Artificial Intelligence & Data Analytics (Hons)

a. Advanced Machine Learning and AI Implementation.

b. To identify, analyse and design solutions for problems using the fundamental principles of Statistics, Computing Sciences, and relevant domain disciplines.
c. To acquire the skills of handling data science programming tools for problem solving.
d. To understand the role of statistical approaches and apply the same to solve real- life problems in the fields of data science.
e. To apply research-based knowledge to analyse and solve problems in data science
f. To create the role of Analytical career with commitment to Professional ethics.

11. BBA (Hons)

a. To develop the information, abilities, and mind-set necessary to solve management problems creatively and systematically by applying the concepts and practices of various disciplines contributing to the management decision making skills, that will enable students to function well in both business and non- business settings in today's world.
b. Establish a sense of self-assurance and awareness of societal issues in general. Communicate with the accounting, business, management, and professional fraternity as well as the general public in an effective manner using both digital and analogue media.
c. To strengthen students' executive personality, entrepreneurship skills, managerial abilities, and intellectual capacity through a blended learning programme in business.
d. To boost student's potential to handle global challenges by highlighting organisational, economic, and cultural diversity
e. To cultivate the conceptual, analytical and rational thinking abilities in order to manage financial risks and a complex corporate environment

12. BCA (Hons)

a. To develop the ability to understand the abstract concepts that lead to various theories in Mathematics and Computer Applications.
b. To identify, analyse, and design solutions for problems using the fundamental principles of Mathematics, Computing Sciences, and relevant domain disciplines
c. To acquire the skills of handling computer application programming tools and technologies for problem-solving.
d. To understand the role of mathematical approaches and apply the same to solve real-life problems in the fields of computer applications.
e. To apply research-based knowledge to analyse and solve problems in computer applications.
f. To create roles in Analytical and Software Development careers with a commitment to Professional ethics

13. BSW (Hons)

a. Evaluate multi-disciplinary and interdisciplinary theories and perspectives in Social Work Practice
b. Articulate the skills in applying Social Work methods to engage, assess, intervene and evaluate individuals, families, groups, organization and communities at Micro, Mezzo & Macro levels of interventions
c. Respond ethically and sensitively to values, beliefs, knowledge, demands and rights of multicultural societies, demonstrating professional behaviour
d. Analyse the responsibilities to uphold social justice, equality, welfare that advance human rights to promote social, racial, economic and environmental justice
e. Apply research informed practice and practice informed research for the target group
f. Apply sustainability and environmental sensitivity in personal and professional spheres

14. B.Sc. Data Science (Hons)

a. To develop the ability to understand the abstract concepts that lead to various data science theories in Statistics and Computer Science.

b. To identify, analyse and design solutions for problems using the fundamental principles of Statistics, Computing Sciences, and relevant domain disciplines.
c. To acquire the skills of handling data science programming tools for problem solving.
d. To understand the role of statistical approaches and apply the same to solve real- life problems in the fields of data science.
e. To apply research-based knowledge to analyse and solve problems in data science
f. To create the role of Analytical career with commitment to Professional ethics.

15. B.Sc. Internet of Things (Hons)

a. Design and implement IoT systems that integrate sensors, actuators, and communication protocols to address real-world challenges in various domains.
b. Apply data analytics techniques to IoT data streams to derive insights for improving system performance, predicting trends, and optimizing operational efficiencies
c. Implement secure IoT architectures, protocols, and strategies to protect IoT devices, networks, and data from cyber threats and breaches.
d. Develop scalable and robust IoT applications across different domains such as smart cities, healthcare, agriculture, and industrial automation.
e. Integrate diverse IoT devices, platforms, and protocols to ensure interoperability and seamless communication within IoT ecosystems
f. Prototype, test, and deploy IoT solutions using development kits, simulation tools, and cloud-based platforms to meet specific application requirements.

16. B.Sc. Networking & Cyber Security (Hons)

a. To develop expertise in designing and implementing defence mechanisms to protect network infrastructures from cyber threats.
b. To acquire skills in forensic analysis of digital evidence to investigate cyber-crimes and security breaches.
c. To conduct comprehensive risk assessments and formulate strategies to mitigate cyber security risks in organizational contexts.
d. To apply secure coding practices to develop resilient software applications resistant to vulnerabilities and attacks.
e. To understand regulatory compliance requirements and governance frameworks relevant to cyber security practices.

17. B.Sc. Psychology (Hons)

a. Apply psychological theories and principles to understand, analyse, and address individual and group behaviour in diverse settings, facilitating effective interventions and solutions.
b. Integrate knowledge from various psychological subfields, such as cognitive, social, developmental, and clinical psychology, to develop a comprehensive understanding of human behaviour and mental processes.
c. Utilize quantitative and qualitative research methods, including experimental designs, surveys, and case studies, to investigate psychological phenomena, collect data, and draw evidence-based conclusions.
d. Demonstrate effective communication skills and leadership abilities in conducting research, presenting psychological concepts, and collaborating with multidisciplinary teams to promote mental health and well-being.
e. Engage in community service and outreach activities to raise awareness about mental health issues, advocate for mental health needs, and provide support to individuals and groups, demonstrating a commitment to helping others and fostering a healthier community.

f. Employ multidisciplinary knowledge, including an understanding of physiological, social, and cultural factors, to enhance psychological assessments and interventions, ensuring a holistic approach to mental health and well-being.

18. M. Sc. Pharmaceutical Chemistry

a. Apply advanced theoretical concepts: Students will demonstrate proficiency in applying advanced theoretical concepts in chemistry, to analyse and solve complex chemical problems.
b. Perform and analyse experimental data: Graduates will be proficient in designing and conducting experiments, utilizing modern laboratory techniques and instrumentation, and analysing experimental data to draw meaningful conclusions and make scientific recommendations.
c. Synthesize and characterize novel compounds: Upon completion of the course, students will be able to design synthetic routes for the preparation of novel compounds, perform chemical syntheses, and employ spectroscopic and analytical methods for compound characterization.
d. Critically evaluate current trends in chemistry research: Upon completion of the course, students will be able to critically evaluate current literature and research in chemistry, identify emerging trends and challenges, and formulate informed opinions and proposals for further investigation in specific subfields of chemistry.
e. Global competency and job readiness: This course will equip the students for seeking suitable careers in chemistry, pharmaceutical industry and related fields.
f. Development of scientific aptitude: Transform students into socially and environmentally responsible citizens with scientific temper.

19. Master of Commerce

a. Inculcating managerial skills and theoretical knowledge for managing business units with special focus on functional areas of business and management.
b. Imparting advanced accounting knowledge and skills and provide awareness regarding latest developments in the field of accounting.
c. Enabling learners to acquire advanced theoretical knowledge on research methods and techniques and also developing capabilities in the application of research in solving business related problems.
d. Acquisition of expertise in specialized fields like finance, taxation, marketing, management and information technology.
e. Development of quantitative aptitude and analytical skills of the learner.
f. Facilitating learner to pursue career in professional areas of commerce and management such as taxation, financial services, consultancy etc.

20. MA English

a. Develop a comprehensive understanding of the historical trajectory of theoretical frameworks, from classical antiquity to modern times, fostering a nuanced appreciation for the rich intellectual heritage of literary criticism.
b. Cultivate a critical mindset that enables the analysis and evaluation of diverse theoretical perspectives, encouraging a multifaceted approach to interpreting literary texts and cultural phenomena.
c. Acquire the ability to synthesize and apply theoretical concepts to contemporary literary and cultural discourses, bridging the gap between theory and praxis.
d. Foster a scholarly disposition that embraces intellectual curiosity, critical thinking, and a commitment to lifelong learning, enabling students to engage in academic discourse and contribute to the advancement of knowledge through meaningful research.
e. Develop proficiency in communicating complex theoretical concepts effectively, both in written and oral forms, enhancing the ability to articulate ideas with clarity and precision.

21. M.Sc. Mathematics

a. Demonstrate a deep understanding of advanced mathematical concepts and theories across various branches of mathematics such as algebra, analysis, topology, geometry, and applied mathematics.
b. Critical Thinking and Analytical Reasoning: Graduates should be capable of critically analysing mathematical concepts, theorems, and proofs, and applying analytical reasoning to solve mathematical problems.
c. Proficient in formulating and solving complex mathematical problems using appropriate mathematical techniques and methodologies.
d. Model real-world problems mathematically, analyse them rigorously, and interpret the results effectively.
e. Use computational tools and numerical methods to solve mathematical problems, simulate mathematical models, and analyse data.
f. Apply mathematical concepts and techniques to interdisciplinary areas such as physics, engineering, computer science.

22. MSW

a. Apply professional knowledge of interdisciplinary foundations, theories, methods and practice models in professional practice.
b. Demonstrate professional skills in engagement with individuals, families, groups and communities.
c. Demonstrate core values and ethical responsibilities in professional practice.
d. Utilize skills in analysing and evaluating public policies and programmes.
e. Exhibit skills in formulating policies leading to research integrated practices.
f. Exhibit democratic leadership and organizational management skills in practice.

23. M.Sc. Space Science

a. Acquire analytic and critical thinking skills through gaining knowledge in major branches of physics and space science.
b. Apply mathematical tools and problem-solving skills to analyse and solve complex physical problems.
c. Design and execute experiments in fundamental as well as advanced topics in physics and space science.
d. To equip the students for seeking suitable careers in Physics and space science.
e. Perform the basic, applied and collaborative research in Physics and related fields.
f. Develop socially and environmentally responsible citizens with scientific temper.

24. M.Sc. Data Science and Analytics

a. Apply advanced theoretical concepts: Students will demonstrate proficiency in applying advanced theoretical concepts in Data Science, to analyse and solve complex chemical problems.
b. Perform and analyse experimental data: Graduates will be proficient in designing and conducting experiments, utilizing modern laboratory techniques and instrumentation, and analysing experimental data to draw meaningful conclusions and make scientific recommendations.
c. Synthesize and characterize novel compounds: Upon completion of the course, students will be able to design synthetic routes for the preparation of novel compounds, perform chemical syntheses, and employ spectroscopic and analytical methods for compound characterization.
d. Critically evaluate current trends in Data Science research: Upon completion of the course, students will be able to critically evaluate current literature and research in Data Science,

identify emerging trends and challenges, and formulate informed opinions and proposals for further investigation in specific subfields of Data Science.

e. Global competency and job readiness: This course will equip the students for seeking suitable careers in Data Science, pharmaceutical industry and related fields.
f. Development of scientific aptitude: Transform students into socially and environmentally responsible citizens with scientific temper.

25. M.Sc. Psychology

a. Develop a strong foundation in psychological theories, principles, and experimental methodologies.
b. Equip students with advanced knowledge, skills, and awareness of the latest developments in psychology.
c. Foster expertise in specialized fields such as clinical, educational, and industrial psychology.
d. Provide comprehensive knowledge of psychometric tools and psychological assessments.
e. Train students to administer, evaluate, and interpret various psychotherapeutic techniques and treatment methods.
f. Prepare learners for careers in diverse professional areas of psychology.
g. Cultivate a scientific attitude, enhance understanding of cognitive processes governing human behaviour, and promote effective communication of psychological concepts in both simple and scientific language.