2.6.1 : Programme Outcomes (POs) and Course Outcomes (COs) for all programmes offered by the institution are stated and displayed on website – Additional Information

CRITERION : 2

TEACHING - LEARNING AND EVALUATION

St. Thomas College

RANNI, PATHANAMTHITTA, KERALA

https://www.stthomascollegeranni.com

OUTCOME BASED EDUCATION HAND BOOK

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PROGRAMME OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

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B.COM MODEL I

Programme Outcomes (PO)

Students will be able to

PO 1- Build a strong foundation in accounting, management and business subjects

PO 2- Seek variety of career options in accounting, management and business related fields

PO 3- Equip with skills and knowledge to excel in their future careers

PO 4- Develop critical thinking skills in students

PO 5- Enter master programmes and pursue professional programmes like C.A, CMA, C.S, etc.

PO 6- Develop entrepreneurial skills

Programme Specific Outcomes (PSO):

Student will be able to

PSO 1- Understand the application of business Knowledge in both theoretical and practical aspects.

PSO 2- Determine the procedures and schedules for preparing financial statements of Companies

PSO 3- File Income tax return and compute the tax liability of individuals

PSO 4- Develop proficiency in the management of an organization

PSO 5- Attain skills in conducting business transactions online

PSO6 - Learn the basic skills for the effective utilization of funds

PSO7 - Follow the ethics pertaining to business transactions

B.Sc. BOTANY MODEL I

Programme Outcome (PO)

Students will be able to

PO 1- Know the importance and scope of the discipline

PO 2- Inculcate interest in and love of nature with its myriad living forms

PO 3- Impart knowledge of Science as the basic objective of Education

PO 4- Develop a scientific attitude to make students open minded, critical and curious

PO 5- Develop an ability to work on their own and to make them fit for the society

Programme Specific Outcomes (PSO)

At the end of the programme, students

PSO 1- Develop skill in practical work, experiments, equipment and laboratory use

PSO 2- Will be exposed to the diversity among life forms

PSO 3- Will aware of natural resources and environment and the importance of conserving it.

PSO 4- Develop ability for the application of the acquired knowledge in the fields of life

PSO 5- Enable to appreciate and apply ethical principles to biological science research and studies.

B.Sc. CHEMISTRY MODEL I

Programme Outcomes (PO)

Enable students to

PO1- Understand and interpret chemical information-verbal, mathematical, physical and graphical..

PO2- Impart skills to gather information from resources and use them.

PO3- Enables students to interact positively and efficiently using English language and inculcating a culture of science discussion among the peers and society.

PO4- Provide needs based education in chemistry of the highest quality at the undergraduate level to make them competitive.

PO5- Offer courses to the choice of the students. This will make the students to take decisions by considering the pros and cons of the decisions they make.

PO6- Perform experiments and interprets the results of observation. It will help the students to be efficiently participating in academic as well as industrial organizations.

PO7- The programmme focuses the importance of green chemistry and educates students to utilize resources in a green method by limiting the use of organic solvents, hazardous chemicals etc.

PO8- Make the students socially responsible by giving awareness regarding the role of chemistry in social development. Makes them actively participate in discussions about the destructive possibilities of science.

Programme Specific Outcomes (PSO)

The programme helps to acquire the following

PSO 1- Read, understand and interpret chemical information- verbal, mathematical and graphical.

PSO 2- Impart skills required to gather information from resources and use them.

PSO 3- Need based education in chemistry of the highest quality at the undergraduate level

PSO 4- Offer courses to the choice of the students.

PSO 5- Perform experiments and interpret the results of observation.

PSO 6- Provide an intellectually stimulating environment to develop skills and enthusiasms of students to the best of their potential.

PSO 7- Use Information Communication Technology to gather knowledge at will.

PSO 8- Attract outstanding students from all backgrounds.

B.Sc. PHYSICS MODEL I

Programme Outcomes (PO)

The Programme

PO 1- Create logical reasoning and critical thinking through the knowledge that they acquired in classrooms, laboratory etc. and apply them in real-life situations.

PO 2- Internalize the significance of various academic as well as extracurricular activities that will enable them to become skilled professionals.

PO 3- Enable students to grow into accountable and empowered individuals who will emerge as scientists, entrepreneurs etc., and be employed in various governmental and non-governmental sectors.

PO 4- Attain expertise in communication skills, acquire moral and social values that keep one creative and compassionate human in all walks of life and turn out to be responsible citizens PO 5- Build up self-esteem and ability to engage in independent and life-long learning in the context of an ever-changing world and competence to face challenges.

PO 6- Recognize the current local and global issues of environmental contexts and involves in activities that promote sustainable and green living Programme Specific Outcomes (PSO) The programme will help to

PSO 1- Develop deep understanding of the various subjects of physics.

PSO 2- Enhance practical and mathematical skills and competencies to conduct scientific experiments.

PSO 3- Create analytical thinking and interpret the inferences from verbal, mathematical and graphical data.

PSO 4- Develop problem solving skills and formulate questions from theoretical understanding of the subject.

PSO 5- Perform various task using their creativity, intellectual capacity, innovative thoughts and enthusiasm with precision and responsibility.

PSO 6- Develop skill to organize events and transfer knowledge through fruitful communications and interact effectively with people from sundry backgrounds.

PSO 7- Ascertain their area of interest in academic and R&D and get prepared for competitive exams.

B.Sc. ZOOLOGY MODEL I

Programme outcome (PO)

Students will acquire

PO 1. Basic knowledge of various disciplines of Zoology and General biology meant both for a graduate terminal course and for higher studies.

PO 2. The programme enable students to inculcate interest in and love of nature with its myriad living creatures.

PO 3. Understand the unity of life with the rich diversity of organisms and their ecological and evolutionary significance.

PO 4. Acquire basic skills in the observation and study of nature, biological techniques, experimental skills and scientific investigation.

PO 5. Acquire basic knowledge and skills in certain applied branches to enable them for self employment.

PO 6. Impart awareness of the conservation of the biosphere.

Programme specific outcome (PSO)

The programme helps to

PSO 1- Identify and list out common animals

PSO 2- Explain various physiological changes in our bodies

PSO 3- Analyze the impact of environment on our bodies

PSO 4- Understand various genetic abnormalities

PSO 5- Develop respect for nature

PSO 6- Explain the role and impact of different environmental conservation programmes

PSO 7- Identify animals beneficial to humans

PSO 8- Identify various potential risk factors to health of humans

PSO 9- Explain the importance of genetic engineering

BA ECONOMICS MODEL 1

Program Outcome (PO)

The programme will enable students to

PO1: Understand basic concepts in economics and apply economic principles in real world situations

PO2: It will foster the economic way of thinking.

PO3: Develop the ability to analyze historical and current events from an economic perspective

PO4: Ability to understand various social issues and economic problems.

PO5: Acquire skills in critical thinking, quantitative reasoning, problem solving and communication

Programme Specific Outcomes (PSO)

The learners will be able

PSO1: to apply knowledge of economics with powerful mathematical and statistical tools

PSO2: to identify, formulate and solve economic problems

PSO3: to conduct empirical studies for social science researches to analyse and interpret them

PSO4: to get knowledge of contemporary social, political and economic issues

PSO5: to perform as a successful economic analyst for industry, trade and commerce, banking and non-banking financial institutions

PSO6: to perform as economic advisors to government and policy makers

PSO7: to acquire knowledge, competency & confidence to take up career in Indian Economic Service

BA ENGLISH MODEL 1

Programme Outcomes (PO)

PO 1- Students acquire knowledge in the field of social sciences, literature and humanities

PO 2- The students will get acquainted with the social, historical, geographical, political, ideological and philosophical tradition and thinking..

PO 3- Equips the students to appear for various competitive examinations or choose the post graduate programme of their choice.

PO 4- Students acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity

PO 5- The students learn to think and act over for the solution of various issues prevailing in the human life to make this world better than ever and to become responsible citizens

Programme Specific Outcomes (PSO)

The learners will acquire the following

PSO 1- Sharply activated sense perceptions

PSO 2- Sharpened emotional, aesthetic, reflective, and intellectual faculties

PSO 3- Knowledge of the noble values in life making him/her a responsible citizen of this world

PSO 4- Improved communication skills in English

BA HISTORY MODEL I

Programme Outcomes (PO)

Students will acquire

PO 1- Capability to critically evaluate practices, policies and theories by following scientific approach to knowledge development

PO 2- Successful transfer of scientific knowledge both orally and in writing and thereby connecting people, ideas, books, media and technology and ability to work as a team

PO 3- The ability to recognize different value systems including your own, understand the moral dimensions of your decisions, and practice social, environmental and biological ethics

PO 4- Environment and Sustainability:The significance of conserving a clean environment for perpetuation and sustainable development.

PO 5- Leadership qualities: Capability for mapping out the tasks of a team and to help and motivating team members to achieve the formulated vision

PO 6- Effective Citizenship and Social interaction: The ability to act with an informed awareness of issues and participate in civic life through volunteering

Programme Specific Outcomes (PSO)

Students will be able to

PSO 1- Explain the importance and scope of History

PSO2- Illustrate new methods, methodologies and theories in History and acquire the primary research skills.

PSO 3- Enhance critical thinking related with History writing

PSO 4- Present an idea about new concepts, Historians and Historical works

PSO 5- Enrich knowledge with discussions about the polity, society, and economy of the ancient, medieval and modern India

PSO 6- Discuss the importance of the history of Kerala from early period to the modern period

PSO 7- Acquire fundamental knowledge of Mass communication and mass media.

PSO 8- Become socially responsible citizens

BACHELOR OF TOURISM AND TRAVEL MANAGEMENT (BTTM)

Programme Outcomes (PO)

PO1 : Student will understand the gap between theory and practical side of tourism industry

PO2: Students will develop professional skills that will prepare them to perform effectively as employee and also as an entrepreneur.

PO3: Students will understand ethical, legal, financial, marketing, human resources and social issues and responsibilities

PO4: Able to solve real problems through effective teamwork, communication and critical thinking

PO5: Able to adapt to the ever changing environment and will be receptive to new skills and new competencies.

PO6: Students will be given assignments and seminars which will mould their leadership capabilities, professional ethics and subject insights.

PO7: Able to effectively communicate both in written and oral business communication.

Programme Specific Outcomes (PSO)

POS1: Students will be familiar with basic definitions and with the travel and tourism cluster,

PSO2: Students will be able to prepare students for managerial positions in Destination planning, Consultancies, Policymaking, Tour operations, Travel agencies, Small and Medium Enterprises (SME), Hospitality and Aviation.

PSO3: After completing the program, the students will be able to work in, travel and tourism related organizations, at various capacities in government levels, Event and Entertainment industry, Hotels, Food & Beverage services etc.

PSO4: The programme also bestows entrepreneurial skills among the students to start new businesses in the above areas.

PSO5: The programme enable students to develop hospitality culture and behavior and to enhance student competencies.

PSO6: To create an industry awareness.

MASTER OF TOURISM AND TRAVEL MANAGEMENT (MTTM)

Programme Outcomes (PO)

Students will be able to

PO1: Analyze the various components of Tourism and to describe how they coincide with each other.

PO2: Depicts the interrelationship between travel, tourism and hospitality industries.

PO3: Develop leadership skills and to provide necessary Managerial, Communicative, IT, product and Resource skills to effectively handle Tourism activities.

PO4: Mould career paths and equip students to face professional challenges.

PO5: Chalk out a research oriented approach.

PO6: Enhance the ability and skills to build long lasting business relationships.

PO7: Be able to target and position the tourism resources.

PO8: Be able to frame a better and viable marketing and product innovation strategies to increase the profitability and stability of an organization.

Programme Specific Outcomes (PSO)

The programme help to

PSO1: Understand multi-form character of travel and tourism business.

PSO2: Explain the diverse nature of tourism, including culture and place, global/local perspectives, and experience design and provision.

PSO3: Apply relevant technology for the production and management of tourism experiences.

PO4: Plan, lead, organize and control resources for effective and efficient tourism operations.

PO5: Create, apply, and evaluate marketing strategies for tourism destinations and organizations.

PO6: Practice empathy and respect for diversity and multicultural perspectives.

PSO7: Apply principles of sustainability to the practice of tourism in the local and global context.

PSO8: Propose and conduct a research project to inform tourism practice.

PSO9: Assess, evaluate, and employ appropriate communication tools for discussions within and between teams and members, various audiences, decision-making teams, and corporate communication tasks.

PSO10: Apply problem solving and critical analysis within diverse contexts.

PSO11: Work collaboratively in groups, both as a leader and a team member, in diverse environments, learning from and contributing to the learning of others.

M.COM

Programme Outcomes (PO)

The programme help students in

PO1- Enhancing the horizon of knowledge so as to enable the learners to carry out qualitative research and pursue academic or professional careers.

PO2- Developing problem analysis skills and knowledge and applying the same in real life situation.

PO3- Using research knowledge and aptitude acquired in the course of study for solving socially relevant problems

PO4 Understanding the role and applicability of knowledge acquired in the context of society, environment and sustainable development sticking on to the ethics and values.

PO5- Developing effective communication skills and ability to work in teams by strengthening group dynamics

PO6- Fostering ability to engage in lifelong learning, demonstrating empathetic social concern, contributing to the development of nation, by making sure of awareness gained on various issues.

Programme Specific Outcomes (PSO)

Programme enables students in

PSO1- Inculcating managerial skills and theoretical knowledge for managing business units with special focus on functional areas of business and management.

PSO2- Imparting advanced accounting knowledge and skills and provide awareness regarding latest developments in the field of accounting.

PSO3- Acquiring advanced theoretical knowledge on research methods and techniques and also developing capabilities in the application of research in solving business related problems

PSO4- Acquisition of expertise in specialized fields like finance, taxation, marketing, management and information technology

PSO5- Development of quantitative aptitude and analytical skills of the learner.

PSO6- Facilitating learner to pursue career in professional areas of commerce and management such as taxation, financial services, consultancy etc.

M.Sc. CHEMISTRY

Programme Outcomes (PO)

The programme enable students to

PO 1- Get a comprehensive understanding of the principles of Chemistry

PO 2- Design and carry out scientific experiments and interpret the data

PO 3- Understand the interdisciplinary nature of Chemistry and to be aware of the emerging fields in Chemistry

PO 4- Build a scientific temper and to learn the necessary skills to succeed in research or industrial field.

PO 5- Define and resolve new problems in Chemistry and participate in the future development of Chemistry

Programme Specific Outcomes (PSO)

The programme enable students to

PSO 1- Develop knowledge about the emerging areas of Chemistry and their applications in various spheres of Chemical sciences

PSO 2- Explain nomenclature, stereochemistry, reactivity, and mechanism of the chemical reactions

PSO 3- Acquire knowledge in the theory and applications of various separation and analytical techniques

PSO 4- Develop research oriented skills.

PSO 5- Illustrate professionalism, including the ability to work in team and apply basic ethical principles.

PSO 6 Recognize and appreciate the importance of the chemistry and its application in academic, industrial, economic, environmental and social contexts

PSO 7- Develop skills for working safely and competently in the laboratory

PSO 8- Impart a good working knowledge in understanding and carrying out data analysis, use of library search tools, and use of chemical simulation software and related computational work

M.Sc. PHYSICS

Programme Outcomes (PO)

The programme enable students to

PO 1: Create, apply and disseminate knowledge leading to innovation

PO 2: Think critically, explore possibilities and exploit opportunities positively

PO 3: Work in teams, facilitating effective interaction in work placeS

PO 4: Lead a sustainable life

PO 5: Embrace lifelong learning

Programme Specific Outcomes (PSO)

The programme enable students to

PSO 1: Aquire a comprehensive knowledge on emerging trends in the various fields of theoretical and experimental physics

PSO 2: Demonstrate the skill in identifying and applying appropriate physical principles and methodologies to tackle a wide range of problems associated with Physics

PSO 3: Employ critical thinking and scientific knowledge to design and carry out Physics experiments.

PSO 4: Build the skill for precise handling of sophisticated equipment

PSO 5 Develop the spirit of diligence and research aptitude to learn and aim high in the realm of research and developme

PSO 6: Accomplish the expertise to successfully implement advanced tasks and projects

PSO 7: Enhance pedagogical and scientific writing skills through modern method

B.COM MODEL I

Programme Outcomes (PO)

Students will be able to

PO 1- Build a strong foundation in accounting, management and business subjects

PO 2- Seek variety of career options in accounting, management and business related fields

PO 3- Equip with skills and knowledge to excel in their future careers

PO 4- Develop critical thinking skills in students

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Student will be able to

PSO 1- Understand the application of business Knowledge in both theoretical and practical aspects.

PSO 2- Determine the procedures and schedules for preparing financial statements of Companies

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PSO 5- Attain skills in conducting business transactions online

PSO6 - Learn the basic skills for the effective utilization of funds

PSO7 - Follow the ethics pertaining to business transactions

B.Sc. BOTANY MODEL I

Programme Outcome (PO)

Students will be able to

PO 1- Know the importance and scope of the discipline

PO 2- Inculcate interest in and love of nature with its myriad living forms

PO 3- Impart knowledge of Science as the basic objective of Education

PO 4- Develop a scientific attitude to make students open minded, critical and curious

PO 5- Develop an ability to work on their own and to make them fit for the society

Programme Specific Outcomes (PSO)

At the end of the programme, students

PSO 1- Develop skill in practical work, experiments, equipment and laboratory use

PSO 2- Will be exposed to the diversity among life forms

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PSO 4- Develop ability for the application of the acquired knowledge in the fields of life

PSO 5- Enable to appreciate and apply ethical principles to biological science research and studies.

B.Sc. CHEMISTRY MODEL I

Programme Outcomes (PO)

Enable students to

PO1- Understand and interpret chemical information-verbal, mathematical, physical and graphical..

PO2- Impart skills to gather information from resources and use them.

PO3- Enables students to interact positively and efficiently using English language and inculcating a culture of science discussion among the peers and society.

PO4- Provide needs based education in chemistry of the highest quality at the undergraduate level to make them competitive.

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PO7- The programmme focuses the importance of green chemistry and educates students to utilize resources in a green method by limiting the use of organic solvents, hazardous chemicals etc.

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The programme helps to acquire the following

PSO 1- Read, understand and interpret chemical information- verbal, mathematical and graphical.

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PSO 5- Perform experiments and interpret the results of observation.

PSO 6- Provide an intellectually stimulating environment to develop skills and enthusiasms of students to the best of their potential.

PSO 7- Use Information Communication Technology to gather knowledge at will.

PSO 8- Attract outstanding students from all backgrounds.

B.Sc. PHYSICS MODEL I

Programme Outcomes (PO)

The Programme

PO 1- Create logical reasoning and critical thinking through the knowledge that they acquired in classrooms, laboratory etc. and apply them in real-life situations.

PO 2- Internalize the significance of various academic as well as extracurricular activities that will enable them to become skilled professionals.

PO 3- Enable students to grow into accountable and empowered individuals who will emerge as scientists, entrepreneurs etc., and be employed in various governmental and nongovernmental sectors.

PO 4- Attain expertise in communication skills, acquire moral and social values that keep one creative and compassionate human in all walks of life and turn out to be responsible citizens

PO 5- Build up self-esteem and ability to engage in independent and life-long learning in the context of an ever-changing world and competence to face challenges.

PO 6- Recognize the current local and global issues of environmental contexts and involves in activities that promote sustainable and green living

Programme Specific Outcomes (PSO)

The programme will help to

PSO 1- Develop deep understanding of the various subjects of physics.

PSO 2- Enhance practical and mathematical skills and competencies to conduct scientific experiments.

PSO 3- Create analytical thinking and interpret the inferences from verbal, mathematical and graphical data.

PSO 4- Develop problem solving skills and formulate questions from theoretical understanding of the subject.

PSO 5- Perform various task using their creativity, intellectual capacity, innovative thoughts and enthusiasm with precision and responsibility.

PSO 6- Develop skill to organize events and transfer knowledge through fruitful communications and interact effectively with people from sundry backgrounds.

PSO 7- Ascertain their area of interest in academic and R&D and get prepared for competitive exams.

B.Sc. ZOOLOGY MODEL I

Programme outcome (PO)

Students will acquire

PO 1. Basic knowledge of various disciplines of Zoology and General biology meant both for a graduate terminal course and for higher studies.

PO 2. The programme enable students to inculcate interest in and love of nature with its myriad living creatures.

PO 3. Understand the unity of life with the rich diversity of organisms and their ecological and evolutionary significance.

PO 4. Acquire basic skills in the observation and study of nature, biological techniques, experimental skills and scientific investigation.

PO 5. Acquire basic knowledge and skills in certain applied branches to enable them for self employment.

PO 6. Impart awareness of the conservation of the biosphere.

Programme specific outcome (PSO)

The programme helps to

PSO 1- Identify and list out common animals

PSO 2- Explain various physiological changes in our bodies

PSO 3- Analyze the impact of environment on our bodies

PSO 4- Understand various genetic abnormalities

PSO 5- Develop respect for nature

PSO 6- Explain the role and impact of different environmental conservation programmes

PSO 7- Identify animals beneficial to humans

PSO 8- Identify various potential risk factors to health of humans

PSO 9- Explain the importance of genetic engineering

BA ECONOMICS MODEL 1

Program Outcome (PO)

The programme will enable students to

PO1: Understand basic concepts in economics and apply economic principles in real world situations

PO2: It will foster the economic way of thinking.

PO3: Develop the ability to analyze historical and current events from an economic perspective

PO4: Ability to understand various social issues and economic problems.

PO5: Acquire skills in critical thinking, quantitative reasoning, problem solving and communication

Programme Specific Outcomes (PSO)

The learners will be able

PSO1: to apply knowledge of economics with powerful mathematical and statistical tools

PSO2: to identify, formulate and solve economic problems

PSO3: to conduct empirical studies for social science researches to analyse and interpret them

PSO4: to get knowledge of contemporary social, political and economic issues

PSO5: to perform as a successful economic analyst for industry, trade and commerce, banking and non-banking financial institutions

PSO6: to perform as economic advisors to government and policy makers

PSO7: to acquire knowledge, competency & confidence to take up career in Indian Economic Service

BA ENGLISH MODEL 1

Programme Outcomes (PO)

PO 1- Students acquire knowledge in the field of social sciences, literature and humanities

PO 2- The students will get acquainted with the social, historical, geographical, political, ideological and philosophical tradition and thinking..

PO 3- Equips the students to appear for various competitive examinations or choose the post graduate programme of their choice.

PO 4- Students acquire knowledge with human values framing the base to deal with various problems in life with courage and humanity

PO 5- The students learn to think and act over for the solution of various issues prevailing in the human life to make this world better than ever and to become responsible citizens

Programme Specific Outcomes (PSO)

The learners will acquire the following

PSO 1- Sharply activated sense perceptions

PSO 2- Sharpened emotional, aesthetic, reflective, and intellectual faculties

PSO 3- Knowledge of the noble values in life making him/her a responsible citizen of this world

PSO 4- Improved communication skills in English

BA HISTORY MODEL I

Programme Outcomes (PO)

Students will acquire

PO 1- Capability to critically evaluate practices, policies and theories by following scientific approach to knowledge development

PO 2- Successful transfer of scientific knowledge both orally and in writing and thereby connecting people, ideas, books, media and technology and ability to work as a team

PO 3- The ability to recognize different value systems including your own, understand the moral dimensions of your decisions, and practice social, environmental and biological ethics

PO 4- Environment and Sustainability:The significance of conserving a clean environment for perpetuation and sustainable development.

PO 5- Leadership qualities: Capability for mapping out the tasks of a team and to help and motivating team members to achieve the formulated vision

PO 6- Effective Citizenship and Social interaction: The ability to act with an informed awareness of issues and participate in civic life through volunteering

Programme Specific Outcomes (PSO)

Students will be able to

PSO 1- Explain the importance and scope of History

PSO2- Illustrate new methods, methodologies and theories in History and acquire the primary research skills.

PSO 3- Enhance critical thinking related with History writing

PSO 4- Present an idea about new concepts, Historians and Historical works

PSO 5- Enrich knowledge with discussions about the polity, society, and economy of the ancient, medieval and modern India

PSO 6- Discuss the importance of the history of Kerala from early period to the modern period

PSO 7- Acquire fundamental knowledge of Mass communication and mass media.

PSO 8- Become socially responsible citizens

BACHELOR OF TOURISM AND TRAVEL MANAGEMENT (BTTM)

Programme Outcomes (PO)

PO1 : Student will understand the gap between theory and practical side of tourism industry

PO2: Students will develop professional skills that will prepare them to perform effectively as employee and also as an entrepreneur.

PO3: Students will understand ethical, legal, financial, marketing, human resources and social issues and responsibilities

PO4: Able to solve real problems through effective teamwork, communication and critical thinking

PO5: Able to adapt to the ever changing environment and will be receptive to new skills and new competencies.

PO6: Students will be given assignments and seminars which will mould their leadership capabilities, professional ethics and subject insights.

PO7: Able to effectively communicate both in written and oral business communication.

Programme Specific Outcomes (PSO)

POS1: Students will be familiar with basic definitions and with the travel and tourism cluster,

PSO2: Students will be able to prepare students for managerial positions in Destination planning, Consultancies, Policymaking, Tour operations, Travel agencies, Small and Medium Enterprises (SME), Hospitality and Aviation.

PSO3: After completing the program, the students will be able to work in, travel and tourism related organizations, at various capacities in government levels, Event and Entertainment industry, Hotels, Food & Beverage services etc.

PSO4: The programme also bestows entrepreneurial skills among the students to start new businesses in the above areas.

PSO5: The programme enable students to develop hospitality culture and behavior and to enhance student competencies.

PSO6: To create industry awareness.

MASTER OF TOURISM AND TRAVEL MANAGEMENT (MTTM)

Programme Outcomes (PO)

Students will be able to

PO1: Analyze the various components of Tourism and to describe how they coincide with each other.

PO2: Depicts the interrelationship between travel, tourism and hospitality industries.

PO3: Develop leadership skills and to provide necessary Managerial, Communicative, IT, product and Resource skills to effectively handle Tourism activities.

PO4: Mould career paths and equip students to face professional challenges.

PO5: Chalk out a research oriented approach.

PO6: Enhance the ability and skills to build long lasting business relationships.

PO7: Be able to target and position the tourism resources.

PO8: Be able to frame a better and viable marketing and product innovation strategies to increasethe profitability and stability of an organization.

Programme Specific Outcomes (PSO)

The programme help to

PSO1: Understand multi-form character of travel and tourism business.

PSO2: Explain the diverse nature of tourism, including culture and place, global/local perspectives, and experience design and provision.

PSO3: Apply relevant technology for the production and management of tourism experiences.

PO4: Plan, lead, organize and control resources for effective and efficient tourism operations.

PO5: Create, apply, and evaluate marketing strategies for tourism destinations and organizations.

PO6: Practice empathy and respect for diversity and multicultural perspectives.

PSO7: Apply principles of sustainability to the practice of tourism in the local and global context.

PSO8: Propose and conduct a research project to inform tourism practice.

PSO9: Assess, evaluate, and employ appropriate communication tools for discussions within and between teams and members, various audiences, decision-making teams, and corporate communication tasks.

PSO10: Apply problem solving and critical analysis within diverse contexts.

PSO11: Work collaboratively in groups, both as a leader and a team member, in diverse environments, learning from and contributing to the learning of others.

M.COM

Programme Outcomes (PO)

The programme help students in

PO1- Enhancing the horizon of knowledge so as to enable the learners to carry out qualitative research and pursue academic or professional careers.

PO2- Developing problem analysis skills and knowledge and applying the same in real life situation.

PO3- Using research knowledge and aptitude acquired in the course of study for solving socially relevant problems

PO4- Understanding the role and applicability of knowledge acquired in the context of society, environment and sustainable development sticking on to the ethics and values.

PO5- Developing effective communication skills and ability to work in teams by strengthening group dynamics

PO6- Fostering ability to engage in lifelong learning, demonstrating empathetic social concern, contributing to the development of nation, by making sure of awareness gained on various issues.

Programme Specific Outcomes (PSO)

Programme enables students in

PSO1- Inculcating managerial skills and theoretical knowledge for managing business units with special focus on functional areas of business and management.

PSO2- Imparting advanced accounting knowledge and skills and provide awareness regarding latest developments in the field of accounting.

PSO3- Acquiring advanced theoretical knowledge on research methods and techniques and also developing capabilities in the application of research in solving business related problems

PSO4- Acquisition of expertise in specialized fields like finance, taxation, marketing, management and information technology

PSO5- Development of quantitative aptitude and analytical skills of the learner.

PSO6- Facilitating learner to pursue career in professional areas of commerce and management such as taxation, financial services, consultancy etc.

M.Sc. CHEMISTRY

Programme Outcomes (PO)

The programme enable students to

PO 1- Get a comprehensive understanding of the principles of Chemistry

PO 2- Design and carry out scientific experiments and interpret the data

PO 3- Understand the interdisciplinary nature of Chemistry and to be aware of the emerging fields in Chemistry

PO 4- Build a scientific temper and to learn the necessary skills to succeed in research or industrial field.

PO 5- Define and resolve new problems in Chemistry and participate in the future development of Chemistry

Programme Specific Outcomes (PSO)

The programme enable students to

PSO 1- Develop knowledge about the emerging areas of Chemistry and their applications in various spheres of Chemical sciences

PSO 2- Explain nomenclature, stereochemistry, reactivity, and mechanism of the chemical reactions

PSO 3- Acquire knowledge in the theory and applications of various separation and analytical techniques

PSO 4- Develop research oriented skills.

PSO 5- Illustrate professionalism, including the ability to work in team and apply basic ethical principles.

PSO 6- Recognize and appreciate the importance of the chemistry and its application in academic, industrial, economic, environmental and social contexts

PSO 7- Develop skills for working safely and competently in the laboratory

PSO 8- Impart a good working knowledge in understanding and carrying out data analysis, use of library search tools, and use of chemical simulation software and related computational work

M.Sc. PHYSICS

Programme Outcomes (PO)

The programme enable students to

PO 1: Create, apply and disseminate knowledge leading to innovation

PO 2: Think critically, explore possibilities and exploit opportunities positively

PO 3: Work in teams, facilitating effective interaction in work placeS

PO 4: Lead a sustainable life

PO 5: Embrace lifelong learning

Programme Specific Outcomes (PSO)

The programme enable students to

PSO 1: Aquire a comprehensive knowledge on emerging trends in the various fields of theoretical and experimental physics

PSO 2: Demonstrate the skill in identifying and applying appropriate physical principles and methodologies to tackle a wide range of problems associated with Physics

PSO 3: Employ critical thinking and scientific knowledge to design and carry out Physics experiments.

PSO 4: Build the skill for precise handling of sophisticated equipment

PSO 5 Develop the spirit of diligence and research aptitude to learn and aim high in the realm of research and developme

PSO 6: Accomplish the expertise to successfully implement advanced tasks and projects

PSO 7: Enhance pedagogical and scientific writing skills through modern method

PART - II

COURSE OUTCOME

SL NO.	NAME OF THE DEPARTMENT	PAGE NO
1	M.COM	29 - 34
2	M.Sc. CHEMISTRY	34 - 37
3	M.Sc. PHYSICS	37 - 42
4	MTTM	43 -52
5	BA ECONOMICS MODEL I	52 - 56
6	BA ENGLISH MODEL I	56 - 61
7	BA HISTORY MODEL 1	61 - 66
8	B.COM MODEL I	66 - 73
9	B.Sc. BOTANY MODEL 1	73 - 78
10	B.Sc. CHEMISTRY MODEL I	78 - 82
11	B.Sc. PHYSICS MODEL I	82 - 88
12	B.Sc. ZOOLOGY MODEL I	88 - 94
13	BTTM	94 - 104
14	MATHEMATICS	104 - 106
15	POLITICAL SCIENCE	106 - 107
16	HINDI	107 - 109
17	MALAYALAM	109 - 110

M.COM COURSE OUTCOME

SEMESTER 1 : CORE COURSE: SPECIALISED ACCOUNTIING

CO1- Providing an in depth understanding about theoretical and practical aspects of major Accounting Standards to apply the same in different practical situations

CO2- Ascertain the value of goodwill and value of companies based on the value of shares and compare the real value of shares and with the market prices and identify the mispricing.

CO3- In-depth understanding about the determination of purchase consideration in the event of amalgamation and to prepare post amalgamation financial statements

CO4- Develop a clear understanding about different types of NBFCs, their provisioning norms and to understand the concept of NAV of mutual funds through its computation

CO5- Acquaint with the theoretical aspects of emerging areas in accounting

CORE COURSE: ORGANISATIONAL BEHAVIOUR

CO1- Basic understanding about the concepts of organization behavior

CO2- A very good understanding about individual behavior, personality and motivation

CO3- Imparting deep understanding about group behavior and leadership related to organizational behavior

CO4- Add the knowledge base of the leaner regarding change management and deal with stress.

CO5- Impart knowledge about the role of organizational culture and conflict on organizational behavior

CORE COURSE: MARKETING MANAGEMENT

CO1- The learner should have a basic understanding about concepts like customer centricity, CRM, value chain and customers delight

CO2- The learner should get a clear understanding about the market segmentation process and its applications in marketing strategies

CO3- Develop an idea about consumer behavior and its impact

CO4- Good understanding about product line, product mix, brand equity, brand identity, brand personality and brand image

CO5- Develop sound ideas regarding services marketing and service quality.

CORE COURSE: MANAGEMENT OPTIMISATION TECHNIQUES

CO1- Develop theoretical understanding about various business optimisation models.

CO2- Ability to develop Linear Programming Models for business problems and solve the same.

CO3- Application of Linear Programming in the areas of transportation and assignment

CO4- Develop decision making skills under uncertainty, risk and replacement of assets

CO5- Understand and apply network analysis techniques for project implementation

CORE COURSE: METHODOLOGY FOR SOCIAL SCIENCE RESEARCHES

CO1- Develop a thorough understanding about the basic concepts of social science research

CO2- After completing this course, the learner should be able to formulate a research design

CO3- After studying the theoretical aspects of sampling design, the learner should be able to draw a sampling design.

CO4- Detailed knowledge about the instrument development, its validation and different forms of scaling.

CO5- Understand the technique of research reporting.

SEMESTER 2 : CORE COURSE: ADVANCED CORPORATE ACCOUNTING

CO1- The learner should be able to prepare consolidated financial statements of group companies.

CO2- Preparation of the financial statements of public utility companies and deal with the disposal of surplus.

CO3- Develop and awareness on the procedure of bankruptcy under the recent Bankruptcy Procedure Code.

CO4- Familiarizing the learner with the accounting procedures of liquidation of companies and preparation of various statements required as per the Companies Act.

CO5- Basic understanding about the preparation of accounts of some special lines of businesses like shipping, hospitals and hotels.

CORE COURSE: HUMAN RESOURCE MANGEMENT

CO1- Acquaintance with basic concepts of HRM and performance appraisal.

CO2- Understanding about human resource development, stress management and work life management.

CO3- High level knowledge about various aspects of training.

CO4- Understanding about variousaspects of industrial relations so as to evaluate the real cases of industrial relations.

CO5- Understanding about HR outsourcing HR accounting and HR audit.

CORE COURSE: INTERNATIONAL BUSINESS AND FINANCE

CO1- Familiarization with globalization, internationalization of business and the international business environment.

CO2- Understanding about theories of international trade, trade barriers and trade blocks.

CO3- Imparting idea about various economic institutions related to international trade.

CO4- Achieve high level knowledge about various aspects of international monetary system.

CO5- Develop an understanding about the international investment environment.

CORE COURSE: QUANTITATIVE TECHNIQUES

CO1- This course intends to give understanding about the applications of quantitative techniques

CO2- This course intends to give understanding about the applications of quantitative techniques

CO3- After learning this course, the student should be in a position to identify appropriate parametric test for testing the hypotheses

CO4- The learner should be equipped with the skills to identify the most suitable non parametric test for testing a hypothesis

CO5- The learner should be equipped with the skills to apply the principles of SQC

CORE COURSE: STRATEGIC MANAGEMENT

CO1- Strong understanding about the theoretical foundations of strategic management.

CO2- Clear understanding about various models of environmental and internal analysis.

CO3- Development of an idea about the strategy formulation process at the corporate level.

CO4- Familiarization with various tools strategic planning and evaluation.

CO5- Understanding about the modes of implementation and control of strategies.

SEMESTER 3 : CORE COURSE: STRATEGIC FINANCIAL MANAGEMENT

CO1- Learn the theoretical foundations of financial management and financial management decisions.

CO2- Evaluate the feasibility of different options regarding discount, credit period, storage cost etc related to current assets and current liabilities and estimate working capital requirements

CO3- Evaluate long term proposals and evaluate the risk associated with long term investment.

CO4- Evaluate the decisions regarding leasing of capital assets.

CO5- Evaluate and Compare the performance of business entities.

CORE COURSE: INCOME TAX – LAW AND PRACTICE

CO1- Acquire knowledge regarding the basic concepts of Income Tax

CO2- Able to compute the income from salary and house property

CO3- Determine taxable profit of a business or profession

CO4- Able to compute capital gain and income from other sources

CO5- Able to calculate Gross Total Income of an individual

CO6- Learner shall be able to determine eligible deductions and compute Taxable Income and tax liability of an individual

CORE COURSE: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

CO1- Able to understand the concepts of investments, different types of investments, views of investment and process of investment and apply the theoretical knowledge in investment information for selecting the securities.

CO2- Understanding the types of risk in security market and applying various tools for the valuation of bonds as well as economic indicators to predict the market

CO3- Understand the tools of technical analysis, analyse the patterns and trends in the market by using various tools and enable to take investment decisions after understanding market efficiency level also.

CO4- Applying Modern portfolio theories and construct optimum portfolios.

CO5- Revising constructed portfolios as per risk and return association by using different strategies.

CORE - ELECTIVE: INDIRECT TAX LAWS

CO1- Understand the basic concepts of the Goods and Services Tax

CO2- Develop a clear ideaabout the levy and collection of tax and tax credit

CO3- Develop the knowledge about the provisions regarding registration, preparations of books of accounts and filing of returns under the Act

CO4 - Understand about the powers of GST authorities regarding inspection, search and seizure

CO5- Basic understanding about the Customs Law in India.

SEMESTER 4 : CORE COURSE: ADVANCED COST AND MANAGEMENT ACCOUNTING

CO1- Apply activity based absorption methods instead of conventional absorption method.

CO2- Apply the marginal costing principles in decision making situations of businesses.

CO3- Dealing with practical cases of pricing decisions in different situations

CO4 - Understand the concepts of standard costing, and the process of cost control through it.

CO5- Deal with the practical issues related to transfer pricing

CORE COURSE: INCOME TAX – ASSESSMENT AND PROCEDURES

CO1- Compute the total income and tax liability of firms and Association of Persons

CO2 – Carry out assessment of companies and determine their tax liability

CO3- Make the assessment of co operative societies and trusts.

CO4- Understanding about the assessment procedures, TDS and advance payment of tax and application in various situations

CO5- Learn tax planning concepts and apply the same

CORE – ELECTIVE: DERIVATIVES AND RISK MANAGEMENT

CO1- Knowledge about the derivative market in India, its evolution, types, players, risks involved and basic quantitative foundations

CO2- Analyze the implications of Risk in the perception of individuals and Institutions and measurement of risks

CO3- Understand and explain the concept of forward market and its function

CO4- Analyze the operation and pricing of various types of futures

CO5- Understand the concepts and methodology of option trading and apply the models of pricing the option contracts

CO6- Develop an idea of exchanges through swaps

CORE COURSE: PERSONAL INVESTMENT AND BEHAVIOURAL FINANCE

CO1- Understand the meaning and significance of Financial literacy, Financial Discipline & Financial Competency, the role of family and parents in financial socialisation

CO2- Understand and Evaluate the Significance of savings on financial destiny and it relationship with Consumerism and to understand the different elements/steps in Personal Financial Planning to attain Financial Well Being and Evaluate the different retail investment avenues.

CO3- Know the meaning of Behavioral Finance, its evolution and related theories

CO4- To understand different Heuristics, Biases and other Irrational Investment Behaviours

CO5- Understand the relationship between biases and to adopt techniques to lower the impact of biases.

M.SC CHEMISTRYCOURSE OUTCOME

SEMESTER I : CH 50 01 01 ORGANOMETALLICS AND NUCLEAR CHEMISTRY

CO1. To understand about various organometallic compounds, their structure, synthesis, bonding and reactions.

CO2. To learn about the catalysis by organometallic compounds.

CO3. To study about bioinorganic compounds and their roles in biological systems.

CO4. To provide an insight on nuclear chemistry and their applications.

CH 50 01 02 STRUCTURAL AND MOLECULAR ORGANIC CHEMISTRY

CO 1. To understand about the basic concept in organic chemistry.

CO2. To learn about various photochemical reactions and physical aspect of organic chemistry.

CO3. Students are enabled to understand about the stereochemistry of organic com ounds and its various conformers.

CH 50 01 03 QUANTUM CHEMISTRY AND GROUP THEORY

CO1. To study about the various postulates of quantum mechanics and its applications

CO2. To understand about the quantum mechanics of hydrogen like atoms.

CO3. To provide a basic understanding on group theory, symmetry of molecules and its applications.

CH 50 01 04 CLASSICAL AND STATISTICAL THERMODYNAMICS

CO1. To understand about the basic concepts of classical thermodynamics.

CO2. To introduce statistical thermodynamics.

SEMESTER II : CH 50 02 01 COORDINATION CHEMISTRY

CO1. To learn about the structural aspects, bonding in coordination complexes.

CO2. To give an insight on kinetics, spectral and magnetic properties of metal complexes.

CO3. To learn about the stereochemistry of coordination compounds.

CO4. To study about the coordination chemistry of lanthanides and actinides.

CO5. To qualitatively analyze various rare cations.

CH 50 02 02 ORGANIC REACTION MECHANISM

CO1. To learn about the various organic reaction mechanism.

CO2. To understand about the chemistry of carbanions, carbonations, carbenes, arynes, nitrenes and carbonyl compounds.

CO3. To study about the radical reactions and concerted reactions.

CO4. To quantitatively analyze various organic compounds.

CH 50 02 03 CHEMICAL BONDING AND COMPUTATIONAL CHEMISTRY

CO1. To expose the students to the field of computational chemistry, this is emerged as a powerful tool in chemistry.

CO2. To calculate certain quantities which are difficult to, by other experimental method.

CO3. To familiarize with programs like games.

CH 50 02 04 MOLECULAR SPECTROSCOY

CO1. To lay a foundation on spectroscopic techniques and resonance spectroscopy.

CO2. To determine the quantity of ions using colorimetric methods.

SEMESTER III : CH 50 03 01 STRUCTURAL INORGANIC CHEMISTRY

CO1. To understand about the various solid state properties, electrical, magnetic and optical properties.

CO2. To study about the inorganic chains, rings, cages and metal clusters.

CO3. To learn about the chemistry of materials.

CH 50 03 02 ORGANIC SYNTHESIS

CO1. To understand the various organic reactions

CO2. To learn about the modern synthetic method and reagent.

CO3. To introduce the basic concept to retrosynthetic analysis, protecting group chemistry, biosynthesis and biomimetic synthesis.

CO4. To learn about the construction of carbocyclic and heterocyclic ring system.

CH 5003 03 CHEMICAL KINETICS, SURFACE CHEMISTRY AND PHOTOCHEMISTRY

CO1. To develop a deeper knowledge in chemical kinetics, mechanism of heterogeneous catalysis, enzyme catalysis and its mechanisms.

CO2. To provide an insight into the topics surface chemistry, photochemistry.

CH 50 03 04 SPECTROSCOPIC METHODS IN CHEMISTRY

CO1. A better understanding on various spectroscopic techniques like ultraviolet-visible and chirooptical spectroscopy, infrared spectroscopy, NMR spectroscopy, Mass spectroscopy.

CO 2. To learn about the structural elucidation using spectroscopic techniques.

SEMESTER IV : CH 50 04 05 ELECTIVE COURSES ADVANCED INORGANIC CHEMISTRY

CO1. With perception of providing better knowledge on inorganic spectroscopic methods, inorganic photochemistry and application of group theory.

CO2. A general introduction to nano materials.

CO3. To understand in depth about various analytical methods.

CO4. To gravimetrically analyze concentration of various ions.

CH 50 04 06 ADVANCED ORGANIC CHEMISTRY

CO1. To apprehend more about supra molecular chemistry.

CO2. To grasp a better knowledge on green alternatives to organic chemistry.

CO3. To learn more about principles of Nano chemistry.

CO4. To understand more about the sterio selective transformations.

CO5. With an insight to introduce about the chemistry of natural products, biomolecules, medicinal chemistry and drug designing.

CO6. To introduce a basic concept on research methodology.

CO7. To prepare various organic compounds.

CH 50 04 07 ADVANCED PHYSICAL CHEMISTRY

CO. To lay a foundation on fluorescence spectroscopy.

CO2. To understand in depth about crystallography, gaseous state, electrochemistry and electromotive force.

CO3. To provide a better understanding on diffraction methods, atomic spectroscopic techniques and electroanalytical techniques.

CO4. To gain hands-on experience on various analytical techniques

M.Sc. PHYSICS COURSE OUTCOME

SEMESTER -I : PH010101 MATHEMATICAL METHODS IN PHYSICS – I

CO 1: Learn about Gradient, Divergence and Curl in orthogonal curvilinear and their typical applications in physics.

CO 2: Learn about special types of matrices that are relevant in physics and then learn about tensors.

CO 3: Get introduced to Special functions like Gamma function, Beta function, Delta func-

tion, Dirac delta function, Bessel functions and their recurrence relations

CO 4: Learn different ways of solving second order differential equations and familiarized with singular points and Frobenius method.

PH010102 CLASSICAL MECHANICS

CO 1: The Lagrangian and Hamiltonian approaches in classical mechanics.

CO 2: The classical background of Quantum mechanics and get familiarized with Poisson brackets and Hamilton -Jacobi equation

CO 3: Kinematics and Dynamics of rigid body in detail and ideas regarding Euler's Equations of motion

CO 4: Theory of small oscillations in detail along with basis of free vibrations.

CO 5: Basic ideas about relativistic lagrangian and applications.

PH010103: ELECTRODYNAMICS

CO 1: It imparts a proper understanding of electricity,magnetism, and electrodynamics. Have gained a clear understanding of Maxwell’s equations and electromagnetic boundary conditions.

CO 2: Learn about the wave nature of the em field and its properties. To learn about the Reflection and Transmission of plane wave in vacuum as well as in conducting medium

CO 3: Learn about the electromagnetic field radiating out of accelerated charges.

CO 4: To impart proper understanding of the impact of relativity in electromagnetism.

CO 5: Have grasped the idea of electromagnetic wave propagation through waveguides.

PH010104 ELECTRONICS

CO1: Learn the basic operational amplifier circuits and their applications

CO 2 : Learn about various active filter circuits and oscillators.

CO 3: Different Communication Systems.

CO 4: Basic ideas of IC 555.

SEMESTER – II

PH010201 MATHEMATICAL METHODS IN PHYSICS – II

CO 1: Learn the fundamentals and applications of Fourier series, Fourier and Laplace transforms, their inverse transforms etc.

CO 2: Know the method of contour integration to evaluate definite integrals of varying complexity.

CO 3: Learn the special functions ,differential equations and Partial differential equations.

PH010202: QUANTUM MECHANICS-I

CO 1: Linear vector spaces, Hilbert space, concepts of basis and operators and bra and ket notation.

CO 2: Both Schrödinger and Heisenberg formulations of time development and their applications.

CO 3: Theory of angular momentum and spin matrices, orbital angular momentum and Clebsh Gordan Coefficient.

CO 4: Space-time symmetries and conservation laws, theory of identical particles.

PH010203 : STATISTICAL MECHANICS

CO 1: Understand the statistical basis of thermodynamics and the properties of macroscopic systems using the knowledge of the properties of individual particles.

CO 2: Apply the principles of statistical mechanics to selected problems.

CO 3: Grasp the basis of ensemble approach in statistical mechanics to a range of situations.

CO 4: Learn the fundamental differences between classical and quantum statistics and understand quantum statistical distribution laws. Study important examples of ideal Bose systems and Fermi systems.

CO 5: Learn the fundamentals of Phase and Phase transitions.

PH010204 CONDENSED MATTER PHYSICS

CO 1: Be able to account for how crystalline materials are studied using diffraction, including concepts like reciprocal lattice and its properties and Brillouin zones. Basic ideas of point groups and space groups and Quasi crystals.

CO 2: Learn what phonons are, and be able to perform estimates of their dispersive and thermal properties , be able to calculate thermal and electrical properties in the free- electron model

CO 3: Concepts of Density of States and effect of temperature on Fermi-Dirac statistics.

CO 4: Learn about the origin of band gap based on Kronig-Penney model. Construction of Brillouin zone and qualitative idea of different zone schemes.

CO 5: Learn the basics of Debye model and Einstein model.

CO 6: Learn about the basics of magnetic properties of solids.

SEMESTER – III : PH010301 : QUANTUM MECHANICS – II

CO 1: Approximation methods for time-independent problems like the WKB approximation.

CO 2: The variational equation and its application to the ground state of the hydrogen and Helium atom.

CO 3: Perturbation theory and Interaction of an atom with the electromagnetic field.

CO 4: To learn the basic concept of Relativistic Quantum Mechanics. To learn the KG equation and Dirac Approaches .

CO 5: Second quantization of the Schrödinger wave field for bosons and fermions.

CO 6 : To know about identity particles, differential scattering cross section and scattering amplitude.

PH010302: COMPUTATIONAL PHYSICS

CO 1: The students should be able to get a wide knowledge of numerical methods in computational Physics to be used to solve many problems which do not have an analytic solution.

CO 2: Grasping the basic elements of numerical methods with application to approximation, integration, differentiation etc.

CO 3: Basics of curve fitting methods and interpolation.

PH010303: ATOMIC AND MOLECULAR PHYSICS

CO 1: know about different atom models and will be able to differentiate different atomic systems, different coupling schemes and their interactions with magnetic and electric fields.

CO 2: Have gained ability to apply the techniques of microwave and infrared spectroscopy to elucidate the structure of molecules

CO 3: Be able to apply the principle of Raman spectroscopy and its applications in the different fields of science & Technology.

CO 4: Become familiar with different resonance spectroscopic techniques and its applications

CO 5: To find solutions to problems related to different spectroscopic systems.

PH800301: DIGITAL SIGNAL PROCESSING

CO 1: Know the basic design techniques for FIR and IIR filter

CO 2: Learn about discrete time signals and linear systems.

CO 3: Frequency analysis and study of discrete fourier transform and discrete time fourier transform.

CO 4: Learn the basics of Z transform and Region of Convergence.

SEMESTER - IV : PH010401 : NUCLEAR AND PARTICLE PHYSICS

CO1: Have a basic knowledge of nuclear size ,shape , binding energy.etc and also the characteristics of nuclear force in detail.

CO2: Be able to gain knowledge about various nuclear models and potentials associated with it.

CO 3 : Acquire knowledge about nuclear decay processes and their outcomes. Have a wide understanding regarding beta and gamma decay.

CO 4: Grasp knowledge about Nuclear reactions,

PH800402: MICROELECTRONICS AND SEMICONDUCTOR DEVICES

CO 1 : Understand the architecture and organization of microprocessor 8085 along with the instruction set format.

CO 2: To learn the Fabrication techniques of monolithic IC

CO 3: Learn the basics of microcontrollers and embedded systems and their applications.

CO 4: Study of 8051 microcontroller and basic programming concepts in 8051.

PH800403 : COMMUNICATION SYSTEMS

CO 1: Understand the basic concept of communication systems.

CO 2 : Analyze the signal flow in communication systems.

CO 3 : Provide idea about fundamental cellular radio concepts, propagation methods, coding and multi access techniques used in the mobile communication

CO 4 : Analyze an entire system as well as the sub-systems in wireless communication.

CO 5 : Examine the basics of orbital mechanics, concepts of satellite networking and analyze link budget equations.

CO 6 : Understand the signal propagation through optical fibers, fiber classifications.

CO 7 : Understand the basic concept of radar and applications of various types.

PH010105 GENERAL PHYSICS PRACTICALS – Semester 1

CO 1: Handling the apparatus

CO 2 : Improve the skill in data analysis

CO 3: Connecting the theoretical knowledge and experimental results

PH010206: ELECTRONICS PRACTICALS – Semester 2

CO1: Understand the various applications of linear IC's like 741 and 555 timer.

CO2: Define significance of Op Amps and their importance.

CO3: Able to use OP Amp to generate sine, square and triangular waveforms.

CO4: Able to use OP Amp as analog to digital and digital to analog converter.

CO5: Acquires the ability to design various electronic circuits using OP AMPS and transistors

PH800403 : ADVANCED PRACTICALS IN ELECTRONICS - Semester 3

CO 1: Familiarize microprocessor programming

CO 2 : Design and analyze various electronic circuits

CO 3: Understand and identify the fundamental concepts and various components of analog communication systems.

CO4: Acquire and apply knowledge and skills in optoelectronics.

PH010402: COMPUTATIONAL PHYSICS PRACTICALS – Semester 4

MTTM COURSE OUTCOME

SEMESTER 1 : TR020101: INTRODUCTION TO TOURISM ADMINISTRATION AND MANAGEMENT

CO1: Familiarizing student with the fundamental concept, growth and development of tourism.

· To realize the potential of tourism industry in India and world.

· To understand the basic concepts of tourism.

CO2: To understand the various elements of Tourism.

· To understand the measurement of tourism and impact of tourism.

· To study the system, elements and motivational factors of tourism.

CO3: To familiarize with travel formalities and documents required for international travel.

CO4: To familiarize with the role and functions of important organizations of tourism

Imparting knowledge to the students about the organizations in tourism industry.

CO5: Understand the importance of tourism legislation and its usage in the current scenario.

TR020102: TOURISM PRODUCTS OF INDIA

CO1: Educating students about the concept of tourism product.

· To understand the nature of different tourism products.

· To understand the geographical features of India and religions of India.

CO2: To familiarize the social and cultural set up in India and its contribution to tourism.

· Imparting knowledge about cultural tourism resources of India.

CO3: To acquire knowledge about archaeological sites in India such as monuments, Temples , Pilgrim Centres, Forts ,Palaces and Museums , Buddhist heritage sites etc

CO4: Familiarizing the important natural tourism products of India such as Hill stations, Beaches, etc.

· To identify and manage emerging tourist destinations and circuits

CO5: The module gives information of countries major wildlife sanctuaries, national parks, biosphere reserves, community reserves, Adventure and ecotourism destinations in India

TR020103: ENTREPRENEURSHIP FOR TOURISM BUSINESS

CO1: To familiarize the students with the concept of entrepreneur main functions.

To identify the role of entrepreneur in economic level.

CO2: To identify the various aspects in entrepreneurship

· To learn about the role of women entrepreneur in tourism sector.

CO3: To learn about the concept of EDP.

· To understand the reason for starting an enterprises.

· To familiarize with special agencies for entrepreneurial development and training.

CO4: Understanding of forms of ownership and the problems faced by a new entrepreneur

· To understand the pre requisites to start enterprise, its registration, license and other requirements.

CO5: To learn about project and its classification

· Understanding of phases of project management, its format of feasibility report

· To identify the SWOT SWOT analysis of business

· To familiarize with subsidies and incentives offered to entrepreneurs.

TR020104: HOSPITALITY OPERATIONS AND MANAGEMENT

CO1: Understanding the classification of hospitality industry and its function.

· Educating students on the evolution of hospitality industry.

CO2: This Module is prescribed to appraise students about the important departments of a classified hotel and to teach various aspects related to accommodation Industry.

·To familiarize the students with various hotel operations and to enhance the skill level of them to perform various duties and responsibilities in a hotel environment

CO3: To impart a comprehensive idea about the operations of hotel, Resort and other catering out lets of a hotel..

CO4: To learn about the changing scenario of hotel industry in terms of technology.

· To examine the role of organizations and its functions in hotel industry.

TR020105: COMMUNICATIVE ENGLISH FOR TOURISM AND HOSPITALITY

CO1: To enable students to have analytical, critical and communicative mind.

· To familiarize with different methods of communication.

· To identify the barriers of communication.

CO2: To analyze the listerning comprehension.

· To identify the interpersonal problems in listerning and feedback.

CO3: To learn about speaking skill through group Discussion and evaluation, Mock interview

· To learn about telephoning skills/ telephone etiquette.

· To learn about how to dealing with difficult people.

CO4: To identify the principles of communicative writing

· To understand about writing aspects.

SEMESTER 2 : TR020201 WORLD TOURISM GEOGRAPHY

CO1: To gain basic knowledge about world tourism attraction.

· To study about the role and importance of geography in tourism development.

· To understand about the different aspects of geography.

CO2: To learn about natural based Geographical wonders of the world and UNESCO's natural heritage sites of the world.

· To understand its distribution in different continents, famed attractions in Asian continent.

CO3: To learn about global position system, global information system.

· To understand about satellite mapping of tourism resources.

CO4: To familiarize with maps & map Study and Globe.

· To study about various aspects of maps.

· To identify major tourist attractions and cities on maps.

CO5: To analyze case study on unique geographical attractions of South Asia.

TR020202: DESTINATION PLANNING AND DEVELOPMENT

CO1: To acquaint students with different destination.

· To enable students to plan and develop destination.

· To learn about the concept of destination.

CO2: To study about tourism destination planning and other aspects.

· To know about planning approaches and indicators, design and innovations.

CO3: To know about tangible and intangible attributes of destination.

· To learn about how to measure destination image.

CO4: To learn about product development and packaging.

· To identify the culture and nature based development in destination.

CO5: To study about public and private policy, Partnership.

· To identify the role of urban civic body, town planning, urban development.

TR020203: TRAVEL AGENCY AND TOUR OPERATIONS

CO1: To learn about the history and development of travel agencies.

· To understand the various activities of travel agency and tour operation business.

· To study the linkages of travel agency with related organizations.

CO2: To know about the functions of travel agency and tour operator.

· To learn about the tips and steps for itinerary planning, limitation and constraints

CO3: To identify itinerary preparation for inbound, outbound and domestic tours.

· To analyze the sample tour itinerary of Thomas Cook, Cox & Kings, and SITA Travels

CO4: To understand with the concept of tour package and other aspects.

CO5 : To familiarize with Govt. rules for getting approval in this sector.

· To analyze the IATA rules and regulations for accreditation, documentation.

· To identify the entrepreneurial skill for travel, tourism and problems of entrepreneurship in travel trade.

TR020204: ORGANIZATIONAL BEHAVIOUR AND MANAGEMENT PROCESS

CO1: To learn with the concept of organization behavior.

·To understand the role of organizational behavior and its challenges & opportunities of organizational behavior in tourism industry.

CO2: To study about the organizational Development and Change.

· To identify the benefit of organizational development

CO3: To learn about personality, Attitudes & Values

· To study about Psycho analytical social theory, Trait theories of personality.

· To learn about factors influencing attitude nature and dimension.

CO4: To learn about perception and Managerial implications of perception.

To familiarize with different Learning approaches

CO5: To study about stress & stress management

· To learn about emotions and emotional intelligence

· To learn about need & importance of TQM in tourism industry.

TR020205: INFORMATION TECHNOLOGY AND E - TOURISM

CO1: To learn how the advances in information technology in tourism business.

· To understand the basics computer Basics .

CO2: To analyze the relationship between information technology and the Tourism Industry Components.

· To learn about online development of package tours.

CO3: To study about technology used in tourism and marketing.

· To learn about the several multimedia aspects.

CO4: To learn about electronic Commerce and E- Business in tourism.

· To understand the history Of Ecommerce.

CO5: To give an in-depth of role of media in tourism industry.

· To analyses a case study on Kerala tourism website.

SEMESTER 3 : TR020301: SUSTAINABLE TOURISM AND ECOTOURISM

CO1: To study about the concept of ecology and other concepts in environment. To familiarize the students with the theoretical input as well as practical issues of sustainable tourism development.

CO2: To learn about ecotourism and ecotourism principles.

· To identify major Eco tourism resources of India.

· To study about Ecotourism Summit (Quebec Declaration 2002 and Oslo Convention 2008) Kyoto Protocol, Agenda 21

CO3: To know about the principles of sustainability, tools of sustainability.

· To learn about the approaches in sustainable tourism and its development

CO4: To learn about responsible Tourism, Community based and Pro-poor tourism (PPT) including community participation, eco-friendly Practices and Energy waste Management

CO5: To learn about Natural Hazards and Disasters and the Causes and results of hazards and disasters.

· To learn about how to manage disasters in destinations.

TR020302: MICE AND EVENT MANAGEMENT

CO1: To provide basic knowledge about the concept of event management in tourism.

· To develop the skill needed to manage events related to tourism business.

· To give a brief introduction to business tourism.

CO2: To study about MICE Tourism.

· To learn about features, criteria's required for a mice destination.

· Understanding of major MICE destinations in the world & in India.

· To identify the major players in event business.

CO3: To learn about how to do a event management program.

· To familiarize with several aspects in event management.

· To learn about resources & logistics required for conducting events.

CO4: To study the relationship between events and tourism industry.

· To identify the relevance & applications of Information technology in events.

CO5: To learn about the relevance of travel marts in tourism industry with examples.

TR020303: TOURISM MARKETING AND PUBLIC RELATIONS

CO1: To get the concept and components of marketing.

To study about marketing Management Philosophies and uniqueness of Tourism Marketing.

CO2: To understand about how to manage Product in tourism business.

· To learn about the new product development processes.

CO3: To develop the right marketing mix for tourism.

· To learn about the market Targeting and market segmentation and positioning of product.

CO4: To understand about the pricing & promotion of tourism products

· To know the various distribution Channel in Travel and Tourism.

· To learn about various product promotion mix.

CO5: To analyze the relationship between Public Relations & Marketing

· To understand the major decisions in marketing PR and tools in marketing

· To familiarize with recent trends in public relations.

TR020304 : MANAGEMENT CONCEPTS AND BASICS OF ACCOUNTING

CO1: To equip the students' first-hand knowledge of principals of managements.

CO2: To study about financial Management concept.

· To learn the role of financial manager & his functions.

CO3: To learn the basics of accounting for a business.

· To study about various accounting principles..

CO4: To learns about how to record a transaction

CO5: To know about how to prepare final accounts.

TR020305: RESEARCH APPLICATIONS IN TOURISM

CO1: To learn about the role of tourism Research

· To know the various research methods for tourism.

CO2: This module examine how to do a research Process

· To familiarize with the qualities of a good research & researcher

CO3: To learn the terms and concepts data collection, types of data, methods and tools for data collection

· Familiarize with the terms - observation ,interview,questionnaire,schedule , Survey Research

· To learn the different Sampling and its techniques.

CO4: Understanding the use of qualitative and quantitative Research in Tourism.

CO5: Understanding the techniques of analyzing Data, Report writing, Different steps in Report writing,

· To learn the prerequisites for writing report

· To understand the application of SPSS (Statistical Package for Social Science).

SEMESTER IV : TR020401: HUMAN RESOURCE MANAGEMENT FOR TOURISM

CO1: To give in depth knowledge about growth and development of HRM and HRD

· To provide basic knowledge about the concepts of Human Resource Management.

CO2: Understanding of man power planning and its problems.

CO3: Educating the students with responsibilities of HR Department in an organization.

· To give a conceptual understanding of human resource practices in organizations.

CO4: To learn about training and Development process

· Special skills required for human resources working in Hotels, Resorts, Home Stays, Tour Operations, Travel Agency, Airlines.

· To study the role and importance of Human Resources in Tourism Industry

CO5: To know about the trends and issues in HRM

· Major challenges faced by them in 21st century

· To learn about duties and responsibilities of HR manager.

TR840401: HERITAGE TOURISM

CO1: To provide basic concept about Heritage

· To examine the difference between culture, Heritage and civilization

· To provide knowledge about World Heritage day - purpose

CO2: To familiarize with World Heritage sites in India (updates)

· To understand the selection procedure of a heritage site.

CO3: To learn about the rule and regulations regarding heritage management in India.

CO4: To know about the heritage management schemes in India.

· Understanding of promotion and marketing strategies for heritage sites in India.

· To examine the term Heritage Interpretation and Interpretive Communication.

TR840402: HEALTH TOURISM

CO1: To elucidate the origin and development of health tourism

· To understand about forms of health tourism-

CO2: To analyze the relation between Health, wellbeing and environment

· To examine the various tools used for wellness

CO3: This module gives a brief overview of Medical systems in India

CO4: SPA and Naturopathy: concepts, principles and benefits.

· A brief overview of Treatments in -Naturopathy: hydrotherapy, mud therapy, Massage therapy, diet therapy etc

· Understanding about SPA, its benefits and spa destinations.

CO5: This module examine the Medical Tourism, Major hospitals in India, latest trends in Medical Tourism, accreditation

TR840403: LEISURE AND RECREATION MANAGEMENT

No. of credits: 3 (Elective Group B Special Interest Tourism Course 3)

CO1: To understand the dynamics of recreation products and their significance for tourism industry.

· Define the term Special interest tourism and its issues and considerations

CO2: This module gives an overview of Recreation Businesses.

CO3: To learn about Resorts, classification, history and its profile.

· Understanding of Concept of Amusement and Theme Parks; Classification; Mall Management.

CO4: To acquire knowledge about water ocean transport system that is responsible for promoting tourism.

· Importance of sports Tourism and major sports events of the World.

CO5: To understand about trends in the recreation industry and marketing of Recreation services &facilities.

TR020402: PROJECT WORK

TR020403: EVALUATION OF STUDY TOUR AND INTERNSHIP REPORT ALONG WITH COMPREHENSIVE VIVA VOCE

BA ECONOMICS COURSE OUTCOME

SEMESTER 1 : EC1CRT01 - PERSPECTIVES AND METHODOLOGY OF ECONOMICS

CO1: Students will familiarise different branches of Social Sciences

CO2: Knowhow on Methodology of Social sciences

CO3: Know how to conduct Social and Economic Researches.

CO4: Understand various quantitative and qualitative economic models.

CO5: Learn to apply methods and theories of Social Sciences to contemporary Issues.

EC2CRT02- MICRO ECONOMIC ANALYSIS I

CO1: It gives the foundation for economic analysis and problem solving.

CO2: Able to analyse consumer behaviour and consumer decisions.

CO3: Learn to apply micro economic tools and techniques in the operation of real economy

CO4: Know how to solve basic micro economic problems.

CO5: A thorough understanding on firm's production processes and decisions.

EC3CRT03-MICRO ECONOMIC ANALYSIS II

CO1: Understand market and factor pricing patterns

CO2: Familiarise Welfare Economics

CO3: Provide an understanding of micro economic concepts and to use it to solve specific questions

CO4: Helps to understand the behavioural pattern of consumers in various market situations

CO5: Enable the students to use economic tools and principles in the analysis of economic policies

EC4CRT04-ECONOMICS OF GROWTH AND DEVELOPMENT

CO1: Student acquaint with the basic concepts and issues of growth and development.

CO2: Provide an insight into the modern approaches to economic development.

CO3: Know how to measure National Income.

CO4: An insight into the need for sustainable economic development.

CO5: Study about Human Development Indicators and their role in designing development programmes.

EC4CRT05- MACRO ECONOMICS-I

CO1: Provides a thorough understanding of economic issues and how treat them in macro perspectives

CO2: Provides an understanding of system of accounts of Government of India

CO3: Helps to understand and compare a closed economy and open economy adjustment mechanism

CO4: Helps to understand the difference between NI accounting and Green accounting

CO5: Provide an insight for sustainable future

EC4CRT06- PUBLIC ECONOMICS

CO1: Know about the budget and fiscal policies.

CO2: To analyse various issues between centre and state governments

CO3: give an understanding of the impact of public policies on allocation of resources and distribution of income

CO4: To know about the working of the public finance system

CO5: Provide a theoretical understanding of state activities

EC5CRT07- QUANTITATIVE TECHNIQUES

CO 1: to introduce the body of mathematics to enable the study of economic theory including micro economic theory, macro economic theory, statistics and econometrics

EC5CRT08- MACROECONOMICS

CO1: Provide a theoretical understanding of aggregate economy

CO2: Compare and contrast classical and Keynesian approaches

CO3: To know about the various factors contributing to inflationary and deflationary pressures

CO4: Helps to understand the role of monetary and fiscal policies to address economic issues

CO5: Thorough understanding of post Keynesian schools of thought

EC5CRT09- ENVIRONMENTAL ECONOMICS .

CO1: Achieve a mission of sustainable society

CO2: How to protect the environment while promoting development

CO3: Acquire the skills of solving environmental problems.

CO4: Provide an understanding of renewable and non renewable resources

CO5: An understanding of civil, political, economic and social rights

ECCRT10- INTRODUCTORY ECONOMETRICS-

CO1: Learn how to estimate a general class of parametric models or semi- parametric models

CO2: Gain knowledge regarding hypothesis testing and model selection

CO3: Know how of Econometric techniques

CO4: Acquire Estimation and analysing skills

OPEN COURSE

EC5OPT01 FUNDAMENTALS OF ECONOMICS

CO1: To know about basic economic problems.

CO2: To understand public expenditure and public revenue and its impacts on Indian economy.

CO3: To know about Banking and non-Banking institutions.

CO4: A thorough understanding on foreign exchange and BOP.

CO5: To provide an understanding of Economic Planning in India and to know about LPG.

SEMESTER 6 : EC6CRT11 QUANTITATIVE METHODS

CO 1: intends to provide an introduction to statistical methods and tools that are essential **for the study of economics**

EC6CRT12- INTERNATIONAL ECONOMICS

CO1: Thorough understanding on International Economic System.

CO2: Learn global economic issues and role of international institutions in tackling them.

CO3: Study fundamental theories in International Economics and examine the relative economic problems in the light of models and theories.

CO4: To understand the mechanism of devaluation and depreciation of currencies and its impact on nations BOP

CO5: Know how about the functioning of foreign exchange markets and exchange rate systems

EC6CRT13- MONEY AND FINANCIAL MARKET

CO1: understand basic concepts about financial institutions and markets.

CO2: Know the changing role of financial sector of the economy

CO3: Understand the role of financial institutions and markets in the modern economies.

CO4: To know about the developmental and stabilising services of financial products

CO5: Awareness and Practice of e-banking services

EC6CRT14- INDIAN ECONOMY

CO1: A thorough understanding on Indian Economic System.

CO2: Know about the policy issues relating to economy of India.

CO3: To know about the structural adjustment programme and the transformation of the Indian economy

CO4: To know about the sectoral contributions to the growth of the Indian economy

CO5: Throws light on magnitude of poverty and inequality and aware the students about the need for social concern

CHOICE BASED ELECTIVE PAPER

EC6CBT02 BUSINESS ECONOMICS

CO1: Understand and identify the economic variables in general business atmosphere

CO2: Perceive the knowledge about Economics at Micro level and various concepts such as Opportunity cost, Marginal concepts, Demand Function and Law of Variable Proportion

CO3: Comprehend the relationship between various process of business

CO4: Accomplish the ideal Short Run and Long Run Equilibrium of a firm and industry and also about different market structure and various pricing techniques

COMPLEMENTARY COURSE

EC 1/3CMT01 PRINCIPLES OF ECONOMICS

CO 1: To have a basic knowledge in basic micro economic theory

EC 2/4CMT02 BASIC ECONOMIC STUDIES

CO 1: Basic understanding in macro economics ,general issues in Indian economy and Kerala economy

BA ENGLISH MODEL 1 COURSE OUTCOME (CO)

COMMON COURSE

EN1CC01: FINE TUNE YOUR ENGLISH

CO1. Students learn the basics of grammar, usage and effective communication.

CO2. Students will be able to confidently use English in both written and spoken forms

EN1CC02 : PEARLS FROM THE DEEP

CO1. Students gain a clear idea of different genres of literature and to the niceties of literary expression

CO2. Students will acquire the ability to appreciate and enjoy works of literature.

EN2CC03 : ISSUES THAT MATTER

CO1. Sensitizes and stimulates the learners of the social and political issues of contemporary significance

CO2. Students respond rationally and positively to the issues raised by connecting their theoretical learning to their everyday life experiences

EN2CC04 : SAVOURING THE CLASSICS

CO1. Studentsget a taste of time tested world classics.

CO2. Students understand the features that go into the making of a classic.

EN3CC05 LITERATURE AND/AS IDENTITY

The students become aware of the following:

CO1. The subtle negotiations of Indigenous and Diasporic identities within Literature.

CO2. The fissures, the tensions and the interstices present in South Asian regional identities.

CO3. The emergence of Life Writing and alternate/alternative/marginal identities.

EN4CC06 ILLUMINATIONS

The students will be able to:

CO1. Maintain a positive attitude to life.

CO2. Evaluate and overcome setbacks in their lives based on the insights that these texts provide

CORE COURSE

SEMESTER I : EN1CR01 METHODOLOGY OF LITERARY STUDIES

The students will be able to discern the following:

CO1. The emergence of literature as a specific discipline within the humanities.

CO2. The tenets of what is now known as 'traditional' approaches and also that of 'formalism.'

CO3. The shift towards contextual-political critiques of literary studies.

CO4. The questions raised by Cultural Studies and Feminism(s)

CO5. The issues of sublaternity and regionality in the literary domain.

SEMESTER II : EN2CR02 INTRODUCING LANGUAGE AND LITERATURE

The students will be able to discern the following:

1. The evolution and the differential traits of the English language till the present time.
2. The evolution of literature from antiquity to postmodern times.
3. The diversity of genres and techniques of representation and narration
4. The links between literature and film as narrative expressions.
5. The emergence of British and American Literature and other world literatures through diverse periods

SEMESTER III : EN3CR03 : HARMONY OF PROSE

The students become:

CO1. Familiar with varied prose styles of expression.

CO2. Aware of eloquent expressions, brevity and aptness of voicing ideas in stylish language.

EN3CR04 : SYMPHONY OF VERSE

The students will get:

CO1. An understanding of the representation of poetry in various periods of the English tradition.

CO2. An awareness of the emerging cultural and aesthetic expressions that poetry makes possible.

SEMESTER IV : EN4CR05 : MODES OF FICTION

The students will get an understanding of the following

CO1. The categories of Britishand non- British short fiction

CO2. The novel as a form of literary expression

EN4CR06 : LANGUAGE AND LINGUISTICS

The students will get a thorough knowledge of the following:

CO1. The various organs and processes involved in the production of speech, the types and typology of speech sounds, segmental &suprasegmental features of the English language, and transcription using IPA.

CO2. Morphological processes and phenomena.

CO3. The various processes involved in the generation of meaning.

SEMESTER V : EN5CR07 : ACTS ON STAGE

The students will be:

CO1. informed about the broad genre-based nuances in the realm of drama.

CO2. able to appreciate and critique drama as an art form.

EN5CR08 : LITERARY CRITICISM AND THEORY

The students:

CO1. will have an awareness about the major developments in literary criticism from the ancient times to the twentieth century.

CO2. will have awareness about the chief strains of Indian literary criticism.

CO3. will be able to analyse short poetical pieces critically.

EN5CR09 : INDIAN WRITING IN ENGLISH

The students become aware of the following:

CO1. The subtle flavours that distinguish the 'Indian' quotient in English writings from India.

CO2. The different concerns that Indian English writers share, cutting across sub-nationalities and regionalities.

EN5CREN01 ENVIRONMENTAL SCIENCE AND HUMAN RIGHTS

The students will be equipped to

CO1. Research and investigate how and why thingshappen, and make their own decisions about complex environmental issues by developingand enhancing critical and creative thinking skills.

CO2. Becomeinformed consumers, workers, as well as policy or decision makers.

CO3. Protect the nature and natural resources.

EN5CROP03 ENGLISH FOR CAREERS

The students will be able:

CO1. To develop communicative skills, which will enable them to prepare for a career andfunction effectively in it.

CO2. To train themselves in making effective presentations

SEMESTER VI : EN6CR10: POSTCOLONIAL LITERATURES

The students will:

1. become aware of the social, political, and cultural aspects of postcolonial societies.
2. realise the impact of colonialism and imperialism on native cultural identities.

EN6CR11 : WOMEN WRITING

The students will be able to:

1. critically respond to literature from a feminist perspective.
2. realize how the patriarchal notions pervade in the social and cultural scenario and how feminism exposes these notions.

EN6CR12 AMERICAN LITERATURE

The students will become:

1. familiar with the evolution of various literary movements in American literature.
2. acquainted with the major authors in American Literary History

EN6CR13 MODERN WORLD LITERATURE

The students will be able to discern the following:

1. That literatures the world over engage in very deep ways with the vicissitudes of life.
2. That World literatures often defy genres/regionalities and canonical assumptions to emerge as aplatform where poetics and politics fuse.

CHOICE BASED COURSE

EN6CB03: MODERN MALAYALAM LITERATURE IN TRANSLATION

The students will get an understanding of:

CO1.A selection of much discussed writers/literary pieces, genres and modern trends in Malayalam

CO2. Formal experiments in Malayalam poems and prose.

COMPLEMENTARY COURSE

EN3CM03 THE EVOLUTION OF LITERARYMOVEMENTS: THE SHAPERS OF DESTINY

The learner will acquire:

CO1.A comprehensive overview of the history of Britain and its impact upon the rest of the world

CO2. An understanding of English literature in the light of historical events

BA HISTORY MODEL 1 COURSE OUTCOME

SEMESTER -1 : HY1CRT01 Methodology and Perspective of Social Sciences

CO1 The students will be familiarized with the broad contours of Social Sciences and their methodology

CO2 The students acquire the knowledge of the basic terms, concepts and categories of history and understand the discipline as an intelligent knowledge system

CO3 Describe different social science disciplines

CO4 Identify contemporary social problems and recommend some solutions.

CO5 Compare and contrast different social science disciplines and define history.

CO6 Classify basics of historical theories.

SEMESTER -2 : HY2CRT02 Understanding Early India: From Hunting Gatherers to Land Grants

CO1 Acquaint with the growth of Indian history in the early stages

CO2 Gather knowledge about the society, culture, and polity of ancient India.

CO3 Invent the past living conditions of hunding gatherers to settled agricultural society.

CO 4 Classify the patterns of cultural revolution of paleolithic, neolithic, chalcolithic, period.

CO5 Compare and contrast the social stratification and social formation of Vedic period via literature and pottery

CO6 Identify the growth of religions like Buddhism, Jainism, ajivika and their contribution to social cultural development .

CO7 Restate the evolution of land grants and identify how it leads to the progress of feudal society in India.

SEMESTER -3

HY3CRT03 Polity, Society and Economy in Pre Colonial India

CO1 Gets an awareness about the various socio political developments in pre colonial India

CO2 Will learn about the political and institutional structures of central and regional powers.

CO3 Compare and contrast the nature of different contemporary historical writings on Sultanate and Mughal period

CO4 Examine the socio-political condition of Delhi Sultanate and Mughal period

HY3CRT04 Cultural Trends in Pre Colonial Kerala

CO1 Acquire knowledge on the early stages of growth of Kerala History

CO2 Provides understanding among students for the various historical processes that have gone into the making of Kerala's pre-colonial societies and polities.

CO3 Categorize different sources of Kerala History.

CO4 Assess the role of Brahmin settlements in Kerala History and culture

CO5 Examine the role of Perumal period in Kerala culture

CO6 Analyze the the characteristics of Medieval Kerala society

SEMESTER-4 : HY4CRT05 Making of Modern Kerala

CO1 Equips student to know about the history of Modern Kerala and the socio political religious processes

CO2 Discuss the arrival European colonial powers and its consequence in Kerala

CO3 Assess the role of socio-reform movements and its leaders in bringing modernity

CO4 Examine & evaluate Movements for political reform and responsible govt in Kerala

CO5 Develops an idea about the formation of contemporary Kerala and its institutions

HY4CRT06 Researching the Past

CO1 Students gain knowledge of the basics in historical research

CO2 Understand qualitative and quantitative models, sources and the steps in historical research.

CO3 Develops an ability to think critically and historically when discussing the past and inspire them to create their own perspectives that enables them to do research.

CO4 Describe Textual Analysis

CO5 Identify techniques of documentation

SEMSTER-5 : HY5CRT07 Inheritance and Departures in Historiography

CO1 The student acquires knowledge of the historiographical trends and schools of thought from the ancient age to the contemporary period.

CO2 The student will articulate the growth of history through ages.

CO3 The knowledge regarding the historical writing will also be improved

CO4 Describe the development of history as a academic discipline and various historical writings

CO5 Analyze the successive developments in historical writing

CO6 Discuss varieties of History contributed mainly by Annales School

CO7 Identify gender & subaltern perspectives on history

HY5CRT08 India: Nation in the Making

CO1 Imbibe an in-depth awareness on the freedom struggle of India, the various phases of National movement and the partition of India and its aftermath.

CO2 Analyze various historical process that have gone into the making of Indian independence

CO3 Identify the impact of British colonial rule over Indian socio- economic- political-cultural, religious spheres

CO4 Assess the role of national leaders in Indian independence

HY5CRT09 State and Society in Ancient and Medieval World

CO1 will learn about the religion, culture, literature and philosophy of the ancient and Medieval World

CO2 Identify the contributions of ancient, medieval and modern civilizations.

CO3 Explain the origin and growth of religion.

CO4 Compare art, architecture , culture and science of different civilizations in the world

CO5 Examine crafts, tools and technologies of world's different civilisations.

HY5CRT10 Environmental Studies and Human Rights in Historical Outline

CO1 The student will be able to critically examine the various sides of environmental issues and apply understanding from the discipline of History

CO2 An environmental history student will be able to recognize the physical chemical and biological components of earth's system.

CO3 An environmental history student will be able to do independent research on human interactions with environment.

CO4 Justify the importance of sustainable development for the future of mankind

CO5 Describe different types of human rights

CO6 Assess the role of Environmental Movements

HY5OCT02 Open Course-Social Implications of Modern revolutions

CO1 Through this course the students understand the role of revolutions in creating history through ages.

CO2 The mutual relationships of revolutions, their implications in social and economic arena will also be acquired.

SEMESTER -6 : HY6CRT11 Making of Contemporary India

CO1 Students will be oriented with the contemporary issues in India.

CO2 They will also acquire knowledge on the contemporary economic and social developments

CO3 Evaluate the major issues faced during nation formation

CO4 Compare and contrast the national and international relations after independence

CO5 Find the major challenges as well as movements in the nations development

HY6CRT12 Understanding Modern World

CO1 Intends to generate an understanding of the major developments in the contemporary world so that the students can articulate them with the earlier developments.

CO2 Identify the concepts of imperialism and colonialism its wider impact in the 19th & 20th century world politics

CO3 Examine the developments occurred in inter-war period and its consequences.

CO4 Evaluate anti colonial movements in Asia & Africa

CO5 Discuss second world war and events leading to the formation of UNO

CO6 Describe the economic and political developments after Second world war.

HY6CRT13 Capitalism and Colonialism

CO1 It introduces students to the processes and debates involved in the transition from feudalism to capitalism in Europe,

CO2 Examines the related expansion of capitalism as a world system in the light of the industrial revolution, and the growing urge for a new wave of imperialist domination in the 19th and 20th Centuries.

CO3 Examine different theories regarding imperialism

CO4 Find out the features of capitalism

CO4 Describe phases of colonial expansion

HY6CRT14 Gender in Indian Perspectives

CO1 Identifies the concept of gender and gender history, the epistemology of gender as a social division and the construction of gender identities in modernity.

CO2 The students gain knowledge of the issues of Indian modernity and gender and also the contemporary issues related to gender

CO3 Investigate the area of Gender Studies

CO4 Illustrate the soicio-historical construction of sexual differences in Indian society

CO5 Recommend to challenge the conventional social norms on male female dichotomy Choice based core course

HY6CBT01 Archeology in India

CO1 The student secures knowledge of the basic concepts in Archeology, its multifarious types and dimensions.

CO2 The main Principles and Methods in Archeology along with the development of archeology in India and Kerala are also studied

CO3 Investigate the major concept, terms and interdisciplinary approaches in archaeology.

CO4 Outline the important scientific techniques, identifying the sites, artefacts, industry in archaeology.

CO5 Restate the transitions between the colonial and modern periods in Indian archaeology.

CO6 Find the major archaeological sites, monuments, and its historical value in India

COMPLEMENTARY COURSE

HY1CMT02- Social Formations in Pre Modern India

CO1 A student of this course will be able to acquire a deep sense of Indian history starting from the beginning period to the medieval times.

CO2 The student learns about the processes of social formation in pre modern times

CO3 Students are able to identify the transformation occurred in Indian societies from early to medieval India

CO4 Define the nature of Indian feudalism and compare it with European Feudalism

CO5 Classify the socio-political condition of Delhi Sultanate, Mughal and Vijayanagara period

HY2CMT03- Transition to the Modern World

CO1 A student of this course explains the trials and turbulences and transition that the world had experienced over the years and analyses the problems of the present day world developments

CO2 Identify the concepts of imperialism and colonialism its wider impact in the 19th & 20th century world politics

CO3 Assess the role of International organizations in maintaining peace and order, co-operation among countries

B.COM MODEL 1 FINANCE AND TAXATION

SEMESTER 1 : CO1CRT01: DIMENSIONS AND METHODOLOGY OF BUSINESS STUD IES

CO1- To understand business and its role in society

CO2- To have an understanding of Business ethics and CSR

CO3- To comprehend the business environment and various dimensions

CO4- To familiarise Technology integration in business

CO5- To introduce the importance and fundamentals of business research

CO1CRT02: FINANCIAL ACCOUNTING– I

CO1- To equip the students with the skill of preparing accounts and financial statements of various types of business units other than corporate undertakings

CO2- To introduce single entry system of accounts

CO3- To enable students with the skills to prepare royalty accounts

CO4- To understand the system of preparing consignment accounts

CO5- To familiar with the procedure involved in the farm accounts

CO1CRT03: CORPORATE REGULATIONS AND ADMINISTRATION

CO1- To understand the provisions of Company Act 2013.

CO2- To familiarize on capital structure and the procedure of share allotment.

CO3- To attain knowledge on rights and duties of shareholders, members and types of meetings in the companies.

CO4- To familiar with rules and regulations relating to appointment of directors

CO5- To acquire the knowledge on modes and procedure of winding up of companies

COMPLEMENTARY COURSE CO1CMT01: BANKING AND INSURANCE

CO1- To familiarize the students with the basic concepts and practice of banking and the principles of Insurance

CO2- To provide the students an understanding about recent trends and innovations in the banking sector

CO3- To provide basic awareness to students about the concept of risk and various types of insurance

CO4- Gain knowledge on various kinds of life insurance plans

CO5- Familiarize the types of the general insurance in India

SEMESTER 2 : CO2CRT04 FINANCIAL ACCOUNTING – II

CO1- To gain knowledge on preparation of accounts in Hire purchase and Installment system.

CO2- To acquire the skill to prepare different types of branch accounts.

CO3- To transform the accounting knowledge in preparing departmental accounting.

CO4- To familiar with the procedure involved in the dissolution of partnership firms.

CO5- To familiarize students with the application of important accounting standards.

CO2CRT05 BUSINESS REGULATORY FRAMEWORK

CO1- To understand the rules governing Indian Contract Act

CO2- To familiarize the rights and discharges of duties by parties in Indemnity, Guaranty, Bailment and Pledge

CO3- To acquire knowledge of rules governs setting up of agency and termination of agency.

CO4- To understand the legal provisions of Sale of Goods Act

CO5- To know the legal provisions of the laws relating to business.

CO2CRT06: BUSINESS MANAGEMENT

CO1- To acquire knowledge on principles of management

CO2- To understand the corporate strategic planning techniques CO3- To acquire the knowledge on organization structure

CO4- To familiarize with the different types of leadership

CO5- To acquaint students with various the techniques of controlling and co-ordination management techniques like Quality Circle, TQM, BPR and Six Sigma

COMPLEMENTARY COURSE CO2CMRT02– PRINCIPLES OF BUSINESS DECISIONS

CO1- To help the students to understand Decision-making and application of economic theories in decision-making

CO2- To acquaint students with concept of demand, demand theory demands forecasting

CO3- To imparting idea about production function and analysis

CO4- To enable the students to understand Cost analysis

CO5- To make the students familiar with the pricing in different markets

SEMESTER 3 : CO3CRT07 CORPORATE ACCOUNTS – I

CO1- To make the students familiarise with the rules relating to issues of shares and debentures.

CO2- To make the students familiarise with the rules relating to underwriting of shares

CO3- To familiar with computation of the financial results of companies

CO4- To familiar with preparation of Investments account

CO5- To familiar with computation of Insurance claims

CO3CRT08 QUANTITATIVE TECHNIQUES FOR BUSINESS – I

CO1- To explain the features and methods of statistics

CO2- To apply the appropriate sampling survey method and collect data

CO3- To calculate an appropriate measure of central tendency

CO4- To calculate an appropriate measure of dispersion

CO5- To interpolate and extrapolate a value from a series and use it for forecasting

CO3CRT09 FINANCIAL MARKETS AND OPERATIONS

CO1- To introduce the operations of Indian financial system to the students

CO2- To create awareness regarding the operations of primary market in India

CO3- To understand the role of secondary market in the financial market operations

CO4- To gain knowledge about the mutual funds, its operations, advantages and disadvantages

CO5- To acquire knowledge about the various derivative instruments deal in the Indian financial market

CO3CRT10: MARKETING MANAGEMENT

CO1- To understand the marketing concepts and marketing environment. cycle.

CO2- To acquire knowledge on product planning and product life

CO3- To gain knowledge on choice of distribution channels and pricing strategies

CO4- To understand the various methods of promotion.

CO5- To understand the peculiarities of marketing, marketing of agricultural products and functions of commodity market.

OPTIONAL CORE CO3CT01: GOODS AND SERVICE TAX

CO1- To provide knowledge about goods service tax

CO2- To create employability to the students in the commercial tax practices, payment and refund of GST

CO3- To understand the procedure for registration

CO4- To know tax related with movement of goods

CO5- To understand the appeals, offences and penalties with respect to GST

SEMESTER 4 : CO4CRT11: CORPORATE ACCOUNTS – II

CO1- To compute the final accounts for a corporate group like banking companies

CO2- To compute the final accounts for insurance companies

CO3- To give a detailed idea about internal reorganization of companies

CO4- To apply the knowledge gained in preparation of final accounts of amalgamated companies of companies

CO5- To study the procedure followed for the liquidation

CO4CRT12: QUANTITATIVE TECHNIQUES FOR BUSINESS- II

CO1- To provide exposure on calculation of measures of correlation

CO2- To provide l exposure on calculation of Regression

CO3- To acquaint students with the concept of index number

CO4- To introduce the students about the concept of provability

CO5- To acquire knowledge about time series analysis

CO5CRT13 ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT

CO1- To understand the concept, functions and growth of entrepreneurship

CO2- To familiarise with project identification and feasibility analysis

CO3- To learn to design and appraise the project and factors influencing the plant location

CO4- To acquire the knowledge on formalities and documentation for registration

CO5- To understand the government policies for the growth of SSIs

Optional Core CO4CT01: FINANCIAL SERVICES

CO1- To create basic idea about financial services and merchant baking

CO2- To facilitate the knowledge about venture capital and securitization

CO3- To understand the concept of leasing and factoring

CO4- To familiarity with the credit rating

CO5- To aware about the concept of mergers and acquisitions

SEMESTER 5 : CO5CRT14: COST ACCOUNTING- I

CO1- To understand the concept of costing and related terms.

CO2- To familiarity with the estimation and controlling of material cost

CO3- To understand the estimation and controlling of labour cost

CO4- To familiarity with the estimation of overhead cost

CO5- To able to prepare cost sheet

CO5CRT15: ENVIRONMENT MANAGEMENT AND HUMAN RIGHTS

CO1- To give the students an understanding of natural resources and ecosystems

CO2- To create awareness among students about the importance of biodiversity and its conservation.

CO3- To create awareness among students about the consequences of pollution and possible solutions to avoid pollution

CO4- To familiarize students with human rights

CO5- To examine the application of Human rights in the field

CO5CRT 16: FINANCIAL MANAGEMENT

CO1- To learn the theoretical foundations of financial management and Financial management decisions.

CO2- To familiarize the theories of capital structure and the concept of cost of capital

CO3- To evaluate feasibility of various investment options

CO4- To provide basic knowledge about working capital management .

CO5- To understand the factors determining dividend policy adopted by companies.

OPTIONAL CORE CO5CT01: INCOME TAX I

CO1- To collect the basic concepts and definitions of Income Tax Act 1961

CO2- To know the residential status of assessed and incomes exempted from tax from salary

CO3- To familiar with the computation of income

CO4- To familiar with the computation of income from house property

CO5- To familiar with the computation of income from business and profession

CO6CRT17: COST ACCOUNTING- II

CO1- To enable the students to understand job costing, batch costing and contract costing.

CO2- To understand the students the different operating methods to control and reduce cost of rendering services

CO3- To inform the students about the methods of costing and also used to ascertain the cost at each stage of manufacturing

CO4- To aware the students to analyse the behavior of cost in relation to changes in volume of Output

CO5- To understand the students about the different tools in the hands of management for effective utilization of resources

CO6CRT18: ADVERTISEMENT AND SALES MANAGEMENT

CO1- By knowing about the various concepts related to advertisements, students will be able to identify misleading and false advertisements and will also get a general idea about framing advertisements.

CO 2- The students will acquire copy writing skills and will also be equipped with the ability to choose a particular medium for advertisement

CO 3- The students will be able to decide an appropriate test for measuring the effectiveness of advertisement as they become aware of various tests for measuring the effectiveness of advertisements.

CO 4- Enable the students to prepare sales promotion budget and the knowledge about various sales promotion strategies may benefit those students who dream of a career in salesmanship.

CO 5- The students will be able to formulate their own strategies to manage sales force in their client organization.

Core CO6CRT19 : AUDITING AND ASSURANCE

CO1- To acquaint themselves about the concepts and principles of auditing , auditing process and the objectives of auditing

CO2- To familiarize with basic terms used in auditing

CO3- To know more about internal control and internal check system

CO4- To understand the duties and liabilities of a company auditor

CO5- To get knowledge about preparation of audit report

CO6- To understand more about government audit ,audit of charitable and educational organizations, hospitals, clubs etc

Core Course 20 : MANAGEMENT ACCOUNTING

CO1- To understand the basic concepts of management accounting

CO2- To understand the analysis of financial statements by using various methods

CO3- To enable the students to understand different ratios used for analyzing financial Statements

CO4- To helps the students to prepare fund flow statement for the business organization

CO5- To helps the students to prepare the cash flow statement required for the business

OPTIONAL CORE-4: INCOME TAX II

CO1- To familiar with the computation of capital gain

CO2- To familiar with the computation of income from other sources

CO3- To know about the aggregation of income and deduction u/s 80C to 80U CO4- To know about the assessment of individuals

CO5- To aware about the income tax authorities and their powers and duties.

B.Sc. BOTANY MODEL 1 COURSE OUTCOME

SEMESTER I : BO1CRT01: METHODOLOGY OF SCIENCE AND AN INTRODUCTION TO BOTANY

CO 1: understand the universal nature of science

CO 2: Demonstrate the use of scientific method

CO 3: To lay a strong foundation to the study in Botany

CO 4: Impart an insight into the different types of classifications in the living kingdom.

CO 5: Appreciate the world of organisms and its course of evolution and diversity.

CO 6: Develop basic skills to study Botany in detail

SEMESTER II : BO2CRT02: MICROBIOLOGY, MYCOLOGY AND PLANT PATHOLOGY

CO 1: to understand the world of microbes, fungi and lichens

CO 2: will appreciate the adaptive strategies of the microbes, fungi and lichens

CO 3: understand the economic and pathological importance of microorganisms

SEMESTER III : BO3CRT03: PHYCOLOGY AND BRYOLOGY

CO 1: to recognize the evolutionary importance of algae

CO 2: familiarize the general characters of algae and bryophytes

CO 3: able to identify algae and bryophytes and they also get a clear picture about

CO 4: realize the application of Phycology in different fields

SEMESTER IV : BO4CRT04: PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY

CO 1: to understand the diversity in habits, habitats and organization of various plant groups

CO 2: an insight into the modern classifications in lower forms of plants

CO 3: to understand the evolutionary trends in Pteridophytes and Gymnosperms

CO 4: to recognize the variations in the anatomical characters of vascular plants

CO 5: understand the significance of Paleobotany and its applications

SEMESTER V : BO5CRT05: ANATOMY, REPRODUCTIVE BOTANY AND MICROTECH NIQUE

CO 1: able to distinguish the internal structure of most evolved groups of plants

CO 2: understand the different reproductive methods in the Angiosperm

CO 3: understand the individual cells and also tissues simultaneously

CO 4: understand the structural adaptations in plants growing in different environment

CO 5: understand the morphology and development of reproductive parts

CO 6: recognize the way of fruit and seed development

CO 7: knowledge would develop to preserve and study plant materials.

BO5CRT06 RESEARCH METHODOLOGY, BIOPHYSICS AND BIOSTATISTICS

CO 1: to acquaint about various techniques in research and develop and research aptitude.

CO 2: prepare the students for conducting independent research work

CO 3: acquaint with different tools and techniques used in research work

CO 4: to equip the students with basic computer skills necessary for conducting research.

Co 5: to enable the students to have handle numerical data and carry out accurate mathematical/statistical evaluation of results

BO5CRT07 PLANT PHYSIOLOGY AND BIOCHEMISTRY

CO 1: understand the basic principles related to various physiological functions in plants

CO 2: familiarize with the basic skills and techniques related to plant physiology

CO 3: Understand the role, structure and importance of the bio molecules associated with plant life

CO 4: familiarize with the recent trends in the field of plant physiology

CO 5: Familiarize with applied aspects of plant physiology in other fields like agriculture.

BO5CRT08 ENVIRONMENTAL SCIENCE AND HUMAN RIGHTS

CO 1: to acquaint the student with the significance of Environmental Science.

CO 2: understand the extent, limitations and depletion of natural resources

CO 3: to design novel mechanism for the sustainable utilization of natural resources

CO 4: understand the structure and function of the Ecosystems

CO 5: to identify the nature and interactions of populations in the ecosystem

CO 6: enable the students to understand various kinds of pollution in the environment, their impacts on the ecosystem and their control measures

CO 7: aware about role of various movements in the protection of nature and natural resources

CO 8: aware about the extent of the total biodiversity and their conservation

CO 9: to assess the positive and negative impacts of Ecotourism and its role in the sustainable utilization of resources for tourism

CO 10: to impart and understanding of the rights and duties of the students towards society

OPEN COURSE

BO1OPT01: HORTICULTURE AND NURSERY MANAGEMENT

CO 1: understand the importance of horticulture in human welfare.

CO 2: propagation and cultural practices of useful vegetable, fruit and garden plants

CO 3: impact of modern technologies in biology on horticultural plants

CO 4: basic concepts of landscaping and garden designing,

CO 5: to inculcate interest in landscaping, gardening and flower and fruit culture

CO 6 : acquaint the learner with the benefits and opportunities in pursuing organic and sustainable farming techniques

CO 7: Inculcate an enthusiasm and awareness about ornamental gardening, nursery management and mushroom cultivation

SEMESTER VI : BO6CRT09 GENETICS, PLANT BREEDING AND HORTICULTURE

CO 1: to impart a basic understanding about the basic principles of heredity.

CO 2: understand the pattern of inheritance in different organisms

Co 3: understand the inheritance pattern of nuclear and extra nuclear genes

Co 4: understand the method of crop improvement

Co 5: understand the importance of horticulture in human welfare

Co 6: develop skill in gardening technique among students

BO6CRT10 CELL AND MOLECULAR BIOLOGY

CO 1: Understand the ultra structure and functioning of cell in the sub-microscopic and molecular level

CO 2: Get an idea of origin, concept of continuity and complexity of life activities

CO 3: Familiarization of life processes

CO 4: Understand the basic and scientific aspect of diversity

CO 5: Understand the cytological aspects of growth and development.

CO 6: Understand DNA as the basis of heredity and variation

BO6CRT11 ANGIOSPERM MORPHOLOGY, TAXONOMY AND ECONOMIC BOTANY

CO 1: Acquaint with the aims, objectives and significance of taxonomy

CO 2: Identify the common species of plants growing in Kerala and their systematic position

CO 3: Develop inductive and deductive reasoning ability

CO 4: Acquaint with the basic technique in the preparation of herbarium

CO 5: Familiarizing with the plants having immense economic importance

BO6CRT12 BIOTECHNOLOGY AND BIOINFORMATICS

CO 1: Understand the current developments in the field of Biotechnology and Bioinformatics

CO 2: Equip the students to carry out plant tissue culture

CO 3: Introduce the vast repositories of biological data knowledge

CO 4: Equip to access and analyze the data available in the databases

ELECTIVE PAPER

BO6PET01 AGRIBUSINESS

CO 1: inculcate and impart an idea about the business opportunities in plant science

CO 2: develop an entrepreneurial mindset and also to stick on to the core subject

CO 3: give an idea about the need of sustainable development and organic farming

CO 4: harness the opportunities and potentials in the field of ecotourism, processing technology and food science

COMPLEMENTARY COURSE

SEMESTER 1: BO1CMT01: CRYPTOGAMS, GYMNOSPERMS AND PLANT PATHOLOGY

CO 1: Foster and encourage an attitude of curiosity appreciation and enquiry of various life forms of plants

CO 2: Understand the identifying character of the different types included in the syllabus

CO 3: The diversity of plants with respect to algae fungi lichen bryophytes pteridophytes and gymnosperms

SEMESTER 2: BO2CMT02: PLANT PHYSIOLOGY

CO 1: Realize the importance of all physiological process which take place in plants

CO 2: Understand the mechanism of various physiological processes related to plant life

SEMESTER 3: BO3CMT03: ANGIOSPERM TAXONOMY AND ECONOMIC BOTANY

CO 1: acquaint the students with the objectives and components of taxonomy

CO 2: help the students to understand the systems of classification of angiosperms

CO 3: help the students to identify the common angiosperm species of Kerala

CO 4: familiarize the student with plants of immense economic importance

SEMESTER 4: BO4CMT04: ANATOMY AND APPLIED BOTANY

CO 1: Understand different types of plant tissues

CO 2: Understand the internal structure of different plant organs and their functions

CO 3: Understand the process of normal and anomalous secondary thickening in plant

CO 4: Know the morphological and anatomical adaptation of plants growing in different habitats

CO 5: Understand how botanical knowledge could be applied for crop improvement

B.Sc. CHEMISTRY MODEL I COURSE OUTCOME

SEMESTER 1 : CH1CRT01 GENERAL AND ANALYTICAL CHEMISTRY .

CO1. To develop interest among students in various branches of inorganic chemistry.

CO2. To impart knowledge about various analytical and instrumental tools for practicing Chemistry.

SEMESTER II : CH2CRT02 THEORETICAL AND INORGANIC CHEMISTRY

CO1. To know about the historical developments, major facts and concepts in chemistry.

CO2. To provide theoretical knowledge on chemical bonding and periodic properties.

CO3. To develop the practical skills on quantitative estimations via volumetric analysis.

SEMESTER III : CH3CRT03 ORGANIC CHEMISTRY -I

CO1. To understand the fundamentals of organic chemistry.

SEMESTER IV : CH4CRT04 ORGANIC CHEMISTRY II

CO1. To enable the students to know about the various chemical reactions and its mechanisms.

CO2. To develop skills in the qualitative analysis of organic compounds.

SEMESTER V : CH5CRT05 ENVIRONMENTAL STUDIES AND HUMAN RIGHTS

CO1. To study the environmental management and impact assessment.

CO2. To understand about the toxic effects of pollutants.

CO3. To know about the pollution of water, air, soil.

CH5CRT06 BASIC ORGANIC CHEMISTRY III

CO1. To impart the students a thorough knowledge about the mechanisms of reactions of some selected functonal groups in organic compounds.

CO2. To identify organic compounds using various spectroscopic techniques.

CH5CRT07 PHYSICAL CHEMISTRY I

CO1. To understand the general characterises different states of matter.

CH5CRT08 PHYSICAL CHEMISTRY II

CO1. To understand the fundamentals of quantum mechanics.

CO2. To know its applications in the study of structure of atoms, bonding in molecules and molecular spectroscopy.

CH5OPT OPEN COURSE-CHEMISTRY IN EVERYDAY LIFE

CO1. To find chemistry around us.

CO2. To understand chemistry behind the foods we eat, cosmetics ,soaps,detergents ,nanomaterials

SEMESTER VI : CH6CRT09 INORGANIC CHEMISTRY

CO1. To sensitize students to the spectrum of applications of chemical methods and materials.

CO2. To give awareness about the application of radioactivity, nanomaterials, thermal and chromatographic techniques.

CO3. To study the chemistry of refractory materials and compounds of P block elements.

CO4. To learn about the qualitative analysis of various ions.

CH6CRT010 ORGANIC CHEMISTRY IV

CO1. To enable the students to learn the chemistry of carbohydrates, heterocyclic compounds, amino acids etc.

CO2. To understand the structure and funtion of Enzymes proteins and nucleic acids.

CO3. To study the fundamentals of terpeniods, alkaloids, vitamins, lipids and steroids.

CO4. To have an elementary idea of supramolecular chemistry and green fluorescent protein.

CO5. To study the preparation of various organic compounds.

CO6. To develop basic skills required for analytical techniques.

CH6CRT011 PHYSICAL CHEMISTRY III

CO1. To provide an insight to the thermodynamic and kinetic aspect of various chemical reactions and phase equilibrium.

CO2. To understand the elementary idea of catalysis.

CO3. To develop skills in doing experiments in kinetics, potentiometry, conductometry and two component system

CH6CRT012 PHYSICAL CHEMISTRY IV

CO1. To provide an insight into the characteristics of different types of solutions and electrochemical phenomena.

CO2. To study the concepts of acids, bases, pH and buffer solutions.

CO3. Quantitative analysis of various ions, such as barium, sulphate, Mg+2, Ni+2 ,Cu+2 etc.

CHOICE BASED COURSE

CH6CBT POLYMER CHEMISTRY

CO1. To learn about the types, preparation and properties of various polymer and the determination of molecular weight of macromolecules.

CO2. To understand applications of various polymers.

COMPLEMENTARY COURSES IN CHEMISTRY

SEMESTER I : CH1CMT01 -BASIC THEORECTICAL AND ANALYTICAL CHEMISTRY

(COMMON FOR ZOOLOGY, BOTANY AND PHYSICS)

COC1. To study about atomic structure and chemical bonding.

CO2. To provide an insight into the fundamental concepts in chemistry, analytical and chromatographic techniques.

SEMESTER II : CH2CMT02 BASIC ORGANIC CHEMISTRY

(COMMON FOR ZOOLOGY, BOTANY AND PHYSICS)

CO1. To understand some fundamental aspects of organic chemistry.

CO2. To study stereochemistry and mechanism of some basic organic reactions.

CO3. To learn about polymers.

CO4. To understand about volumetric analysis-acidimetry,alkalimetry,permanganometry.

SEMESTER III : CH3CMT03PHYSICAL CHEMISTRY I (FOR PHYSICS)

CO1. To develop proper aptitude towards the study of molecular structure

CO2. To studying electrical and nuclear properties of molecules.

CO3. To study about various states of matter.

CH3CMC04 ADVANCED INORGNIC AND ORGANIC CHEMISTRY

(COMMON FOR ZOOLOGY, BOTANY)

CO1. To understand facts and concepts in inorganic and organic chemistry.

CO2. To learn about various types of food additives.

CO3. To learn about the basic concepts of nuclear chemistry and heterocyclic compounds.

SEMESTER IV : CH4CMT05 ADVANCED BIO-ORGANIC CHEMISTRY

(COMMON FOR ZOOLOGY, BOTANY)

CO1. To enable the students to learn the chemistry of carbohydrates, amino acids etc.

CO2. To understand the structure and function of Enzymes proteins and nucleic acids.

CO 3. To study the fundamentals of terpeniods, alkaloids, vitamins, lipids and steroids.

CO4. To understand about qualitative analysis of various organic compounds.

SEMESTER IV : CH4CM06 PHYSICAL CHEMISTRY II (FOR PHYSICS)

CO1. To provide an insight to the kinetic aspect of various chemical reacons.

CO2. To understand the basic facts and concepts in spectroscopy.

CO3. To study the rules governing chemical reactions and factors influencing them.

CO4. To develop skills in doing experiments in kinecs, potenometry, conductometry and two component system

B.SC PHYSICS MODEL 1 COURSE OUTCOME

SEMESTER I : PH1CRT01: METHODOLOGY AND PERSPECTIVES OF PHYSICS

CO 1. Acquire an overview on the inspiring history in the development of physics.

CO 2. Develop a knowledge on different number systems and their conversion process and to identify the application of binary numbers in computers.

CO 3. Learn the relevance of vectors in physics.

CO 4. Get acquainted with different coordinate systems and their applications in various kinds of problems in physics.

CO 5. Attain knowledge on the importance of care to be taken while doing experiment and distinguish different types of errors that can involve in the experiment.

SEMESTER II : PH2CRT02: MECHANICS AND PROPERTIES OF MATTER

CO 1. Understand superposition of waves.

CO 2. Define simple harmonic motion and deduce total energy of SHM.

CO 3. Analyze the theory of various oscillations and resonance.

CO 4. State and prove parallel and perpendicular axes theorems.

CO 5. Derive expressions for moment of inertia of regular bodies using parallel/ perpendicular axes theorem.

CO 6. Learn about elasticity and apply this knowledge in construction of beams, bridges etc

CO 7. Understand the properties of fluids such as viscosity,surface tension and it's applications

SEMESTER III : PH3CRT03 OPTICS, LASER AND FIBER OPTICS

CO 1. Distinguish the basic phenomena like interference, diffraction and polarization that occur in nature.

CO 2. Understand the basic theories and applications of these phenomena.

CO 3. Understand the basic working principle of Laser and different types of lasers.

CO 4. Familiarize applications of lasers in different fields.

CO 5. Study the light propagation in optical fibres and acquaint with different kinds of optical fibres and its applications.

SEMESTER IV : PH4CRT04 SEMICONDUCTOR PHYSICS

CO 1. Gain knowledge about the basic of semiconductor components like diode, rectifier, clipper, clamper, transistor, FET, MOSFET and operational amplifier.

CO 2. Build foundation in the theoretical understanding to handle the electronic components such as resistors, capacitors, inductors, ordinary diode, zener diode etc. in a circuit when connected individually or in combination.

CO 3. Grasp the knowledge to participate in the design and development of electronic systems.

SEMESTER V : PH5CRT05 ELECTRICITY AND ELECTRODYNAMICS

CO 1. Lay a sound theoretical foundation in electricity and electrodynamics.

CO 2. Realize how the development of modern technological world rely on the field- electricity

CO 3. Comprehend various phenomena and applications around them related to electric and magnetic field.

CO 4. Understand the power of Maxwell's Equations and their various solutions to ponder into various topics that include Energy and Momentum of Electromagnetic Fields, Radiation Sources and Antennas, Electrodynamics in Macroscopic Media, Wave Guides and Cavities.

CO 5 Acquire practical knowledge to handle electronic gadgets and explain its working principle.

PH5CRT06 CLASSICAL AND QUANTUM MECHANICS

CO 1. Understand the basic concepts of constraints and the formulation of Lagrangian and Hamiltonian.

CO 2. Appreciate the historical development and origin of quantum mechanics.

CO 3. Understand the basic mathematical formulation of quantum mechanics.

CO 4. Apply the Schrodinger equation for solving the problem of a particle in a box.

CO 5. Distinguish between classical mechanics and quantum mechanics.

PH5CRT07 DIGITAL ELECTRONICS AND PROGRAMMING

CO 1. Explain the basic logic operations of NOT, AND, OR, NAND, NOR, and XOR gates.

CO 2. Simplify circuits and Boolean expressions using the Boolean laws.

CO 3. Design different registers and counters.

CO 4. Design basic combinational and sequential logic circuits.

CO 5. Simplify Boolean algebra expressions using Karnaugh maps.

CO 6. Understand the basics of object oriented C++ programming.

CO 7. Acquire the skills to write the programs using the basic concepts of C++.

PH5CRT08 ENVIRONMENTAL PHYSICS AND HUMAN RIGHTS

CO 1. Gain basic knowledge about water resources and proper water management.

CO 2. Realize different aspects of pollution, its dangers and means to prevent it.

CO 3. Recognize the need to protect various energy sources and understand advantages of renewable energy sources and steps to harness them.

CO 4. Identify different means of harnessing solar energy and its advantages.

CO 5. Understand their basic rights as well as ways and means to prevent the violation of rights.

SEMESTER VI : PH6CRT09 THERMAL AND STATISTICAL PHYSICS

CO 1. Aquire knowledge about the basic concepts of thermodynamics such as temperature, pressure, system, properties, process, state, cycles and equilibrium.

CO 2. Understand laws of thermodynamics and their applications.

CO 3. Define the concept of entropy and explain its physical significance.

CO 4. Explain Lees Disc experiment and can calculate the thermal conductivity by experimentally.

CO 5. Explain fundamental concepts of statistical mechanics.

CO 6. Derive Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac distribution laws and compare the laws.

PH6CRT10 RELATIVITY AND SPECTROSCOPY

CO 1. Explain special theory of relativity.

CO 2. Derive Lorentz transformation equations.

CO 3. Illustrate twin paradox, time dilation and length contraction

CO4. Basic ideas of Rotational, Vibrational and Raman spectra

CO5. Study of atom models and in specific, the vector atom model Study Zeeman and Paschen Bach effect

CO 6. Concepts and applications of NMR and ESR

PH6CRT11 NUCLEAR, PARTICLE PHYSICS AND ASTROPHYSICS

CO 1. Understand the basic tenants of nuclear physics and particle physics.

CO 2. Differentiate the different types of nuclear reactions.

CO 3. Explain the origin and effects of cosmic rays.

CO 4. Basic ideas of stellar evolution

CO 4. Develops a research interest in nuclear & Astrophysics.

PH6CRT12 SOLID STATE PHYSICS

CO 1. Realize the importance of crystallography in solid state physics.

CO 2. Classify materials as metals, semiconductors and insulators based on band theory.

CO 3. Distinguish various chemical bonding in common crystal structures.

CO 4. Describe material properties such as magnetism, dielectric properties, super- conductivity and understand the theoretical framework of the same.

CO 5. Solve problems and analyze experimental results.

PH6CBT03 COMPUTATIONAL PHYSICS (CHOICE BASED COURSE)

CO 1. Understand the methods to solve linear algebraic and nonlinear equations.

CO 2. Explain the methods of curve fitting and different interpolation formulas

CO 3. Discuss numerical differentiation and integration methods.

CO 4. Understand numerical differentiation and integration methods.

CO 5. Use numerical methods to solve ordinary differential equations.

OPEN COURSE

PH5OPT02: PHYSICS IN DAILY LIFE

CO 1. List the units and dimensions of fundamental and derived quantities.

CO 2. Explain the concepts of reflection, refraction, diffraction, interference, scattering and total internal reflection.

CO 3. Understand the different methods of power generation and evaluate the merits and demerits of the same.

CO 4. Learn about different phases of matter, properties of fluids, heat, electromagnetic waves and superconductivity.

CO 5. Realize the importance of satellites.

CO 6. Understand the different phenomena that occur in the universe.

COMPLEMENTARY PHYSICS FOR CHEMISTRY

PH1CMT01: PROPERTIES OF MATTER & THERMODYNAMICS

CO 1. Understand the theory behind the modulus of elasticity.

CO 2. Analyze the bending moments/torsion while applying force on different objects.

CO 3. Understand and evaluate the practical significance of the fluid dynamics.

CO 4. Explain thermodynamic systems and processes.

CO 5. Understand the theory and practical aspects of heat engines.

PH2CMT01: MECHANICS AND SUPERCONDUCTIVITY

CO 1. Recall the laws of gravitation.

CO 2. Apply parallel and perpendicular axes theorem.

CO 3. Describe the characteristics of waves.

CO 4. Understand the origin of superconductivity.

CO 5. Classify materials like insulators, semiconductors and superconductors.

PH3CMT01: MODERN PHYSICS AND MAGNETISM

CO 1. Describe different atom models.

CO 2. Calculate various factors related to radioactivity.

CO 3. Explain the inadequacies of classical physics and experimental evidences for quantum theory.

CO 4. Obtain the Schrodinger equation and use it for solving the problem of a particle in a box.

CO 5. Understand the principles of various spectroscopic methods.

CO 6. Comprehend the theory behind diodes and transistors.

CO 7. Discuss about magnetism, different magnetic materials, its properties and reason for Earth's magnetism.

PH4CMT01: OPTICS & SOLID STATE PHYSICS

CO 1. Distinguish the basic phenomena like interference, diffraction and polarization that occur in nature.

CO 2. Understand the basic working principle of Laser and its applications.

CO 3. Develop a knowledge on the theory of light propagation through fibres and various kinds of fibres.

CO 4. Define different types of polarization leading to dielectric property.

CO 5. Model different crystal structures.

CO 6. Enhance problem solving skills and correlate between numerical problems and real life situations.

Importance of Practical's

By conducting various experiments, students will be able to internalize a number of skills and they will be benefitted in life many ways as follows:

- Understand the basic concepts of physics thoroughly.
- Provide platform to test out the theoretical knowledge gained in class rooms.
- Learn to formulate physical phenomenon mathematically.
- Make inferences from observations.
- Earn competency to use mathematical methods to solve physics problems.
- Enhance the observational and technical skills.
- Ability to handle various instruments in the laboratory.
- Learn to tabulate the data systematically.
- Development of personal learning and thinking capacity.
- Develop observational, analytical and evaluating skills.
- Grow the aptitude towards research.

BSc. ZOOLOGY MODEL 1 COURSE OUTCOME

SEMESTER I : ZY1CRT01 - GENERAL PERSPECTIVES IN SCIENCE & PROTISTAN DI VERSITY

CO 1: Have awareness about the basic philosophy of science, its history, concepts and scope.

CO 2: Develop proper scientific mind, culture and work habits.

CO 3: Get familiarized with the basic tools and techniques of scientific study with emphasis on biological sciences.

CO 4: Have knowledge on different phylums of Protista with examples, helps us to identify various disease causing organisms, parasites and their stages of life cycle, that cannot be observed with naked eye.

SEMESTER II : ZY2CRT02 - ANIMAL DIVERSITY - NON CHORDATA

CO 1: Be able to scientifically classify invertebrate fauna.

CO 2: Have knowledge about the physiological and anatomical peculiarities of some invertebrate phyla through type study.

CO 3: Know evolutionary significance of various invertebrate fauna.

CO 4: Be curious about the living things around them.

SEMESTER III : ZY3CRT03 - ANIMAL DIVERSITY – CHORDATA

CO 1: Observe the diversity in chordates and their systematic position.

CO 2: Be aware of the economic importance of various classes of Chordates

CO 3: Have knowledge about the physiological and anatomical peculiarities of some vertebrate phyla through type study.

CO 4: Be aware of the evolutionary importance of different classes of organisms.

SEMESTER IV : ZY4CRT04 - RESEARCH METHODOLOGY, BIOPHYSICS AND BIOSTATISTICS

CO 1: Be familiar with basic concept of scientific method in research process.

CO 2: Have knowledge on various research designs, research communication and scientific documentation.

CO 3: Be aware about the laws and ethical values in biology.

CO 4: Be equipped with basic techniques of animal rearing collection and preservation.

CO 5: Apply statistical methods in biological studies.

SEMESTER IV : ZY4CRP04 – ANIMAL DIVERSITY – CHORDATA, RESEARCH METHODOLOGY,

BIOPHYSICS AND BIOSTATISTICS

CO 1: Identify and classify organisms to their respective taxa.

CO 2: Develop skill on scientific drawing and dissections

CO 3: Be able to identify organisms using taxonomic keys

CO 4: Identify the different bones of bird and rabbit

CO 5: Be equipped with basic techniques of animal rearing collection and estimation.

CO 6: Know about the working principle and uses of different instruments used in the laboratory.

CO 7: Use computer applications for various biological and statistical uses.

SEMESTER V : ZY5CRT05 – ENVIRONMENTAL BIOLOGY AND HUMAN RIGHTS

CO 1: Have knowledge on the basic concepts of environmental sciences, ecosystems, natural resources, population, environment and society.

CO 2: Be aware of natural resources, their protection, conservation, and the factors polluting the environment, their impacts and control measures.

CO 3: Know about the basic concepts of toxicology, their impact on human health and remedial measures.

CO 4: Be conscious about biodiversity, environmental issues and conservation strategies.

CO 5: Develop the real sense of human rights – its concepts & manifestations

ZY5CRT06 – CELL BIOLOGY AND GENETICS

CO 1: Understand the structure and function of the cell, fundamental unit of life.

CO 2: Be aware of different cell organelles, their structure and role in living organisms

CO 3: Have knowledge about cell signalling and cell division.

CO 4: Know about the central role of genes and their inheritance in the life of all organisms.

CO 5: Be familiar with chromosomal theory of sex determination, linkage and recombination.

CO 6: Identify and understand the different genetic abnormalities and mutations.

ZY5CRT07 – EVOLUTION, ETHOLOGY & ZOOGEOGRAPHY

CO 1: Know about the evolutionary history of earth – living and non living

CO 2: Understand about evolutionary concepts and theories

CO 3: Know the mechanism and factors affecting evolution.

CO 4: Acquire knowledge about species, speciation and various mechanisms involved in development of new species.

CO 5: Know the origin of earth and various organism and how humans evolved.

CO 6: Obtain basic knowledge on animal behavioural patterns and their role.

CO 7: The social organization in insects and mammals.

CO 8: Understand about the distribution of animals on earth, its pattern, evolution and causative factors.

ZY5CRT08 – HUMAN PHYSIOLOGY, BIOCHEMISTRY AND ENDOCRINOLOGY

The students should :-

CO 1: Be able to explain the basic principles of biochemistry.

CO 2: Understand the metabolism of various biological molecules.

CO 3: Know about the organs, their structure and function associated with different systems in human body.

CO 4: Be able to illustrate different kinds of food, their structure, function and metabolism.

CO 5: Be able to explain various aspects of physiological activities of animals with special reference to humans.

CO 6: Understand hormonal regulation of physiological processes in invertebrates and vertebrates

CO 7: Be familiar with hormonal regulation of physiological systems in several invertebrate and vertebrate systems

OPEN COURSE

ZY5OPT02 – PUBLIC HEALTH AND NUTRITION

CO 1: Aware the real sense of health

CO 2: Understand the role of balanced diet in maintaining health

CO 3: Practice yoga and meditation in day to day life.

SEMESTER VI : ZY6CRT09 – DEVELOPMENTAL BIOLOGY

The students should :-

CO 1: Understand the structure and function of reproductive organs.

CO 2: Know about various stages involved in development of embryos.

CO 3: Acquire knowledge about embryology of frog, chick and humans

CO 4: Have the knowledge on experimental methods and designs that can be used for future studies and research in embryology,teratology and developmental defects..

ZY6CRT10

MICROBIOLOGY & IMMUNOLOGY

CO 1: Understand the microbial world, its structure and function.

CO 2: Know about various microbial infections and their epidemiology

CO 3: Knowledge on fundamental aspects of basic biology of bacteria and viruses

CO 4: Familiarize the role of immunology in human health and well – being.

ZY6CRT11 – BIOTECHNOLOGY, BIOINFORMATICS & MOLECULAR BIOLOGY

The students should :-

CO 1: Acquire intensive and in depth learning in the field of biotechnology.

CO 2: Familiarise with emerging field of biotechnology practices and approaches.

CO 3: Know about the applications in medical, industrial, environmental agricultural and nano-medicine.

CO 4: Familiarize with public policy, biosafety and intellectual property rights issues related to biotechnology.

CO 5: Study structural and functional details of basic unit of life at the molecular level.

ZY6CRT12 OCCUPATIONAL ZOOLOGY

CO 1: Equip with self employment capabilities.

CO 2: Know about profitable farming.

CO 3: Aware of cottage industries.

ZY6CBT04 – NUTRITION, HEALTH AND LIVESTYLE MANAGEMENT

CO 1: Understand general concept of health and wellness.

CO 2: Know principles of nutrition and its role in health.

CO 3: Familiarize with food safety, food laws and regulations.

CO 4: Familiarize life style diseases.

CO 5: Value of good life style practices, physical fitness and healthy food habits.

COMPLEMENTARY COURSE : ZOOLOGY MODEL 1

SEMESTER I : ZY1CMT01-NON-CHORDATE DIVERSITY

CO 1: Study the scientific classification of invertebrate fauna

CO 2: Learn the physiological and anatomical peculiarities of invertebrate phyla through type study.

CO 3: Learn the unity of life with rich diversity of organisms and evolutionary significance of invertebrate fauna

CO 4: Generate curiosity in the biota living around them

SEMESTER II : ZY2CMT02- CHORDATE DIVERSITY

The students should :-

CO 1: Observe the diversity in chordates and their systematic position

CO 2: Aware of the economic importance of Chordates

CO 3: Learn the physiological and anatomical peculiarities of Vertebrate phyla through type study.

CO 1: Generate curiosity in Vetrebrates living around them

SEMESTER III : ZY3CMT03-PHYSIOLOGY AND IMMUNOLOGY

CO 1: Appreciate the correlation between structure and function of organisms

CO 2: Aware of the health related problems, their origin and treatment

CO 3: Understand how efficiently our immune system work in the body

CO 4: Know about preventing common diseases rather than curing

SEMESTER IV : ZY4CMT04-APPLIED ZOOLOGY

CO 1: Acquire basic knowledge and skills in applied branches of Zoology

CO 2: Understand the technology for utilising ecofriendly organisms around them for beneficial purpose

CO 3: Equip with self employment opportunities with scientific knowledge to perform profitably and confidently

BACHELOR OF TOURISM AND TRAVEL MANAGEMENT - COURSE OUTCOME

SEMESTER 1 : TT1CRT01: METHODOLOGY FOR TOURISM

CO1: To enriches the students about various concepts used in tourism industry.

CO2: To understands the tourism phenomena and the distribution of the components of tourism.

CO3: To educates the pupil about the general problems of measurement.

CO4: To learns the concepts and importance of tourism in different sectors.

CO5: To learns about International & National Tourism Organizations.

TT1CRT02: CULTURAL HERITAGE OF INDIA

CO1: To know about different Cultural diversity of India.

CO2: To familiarize the culture set up in India and its contribution to Tourism.

Understanding of various dynasties who ruled in India.

CO3: To learn about Muslim Invasions in India.

CO4: To familiarize with art, architecture and temples under Mughals, painting and music, Fairs and Festivals, cultural synthesis etc.

TT1CRT03: PRINCIPLES OF MANAGEMENT

CO1: To provide basic knowledge about the various concepts of management.

CO2: To learn about Planning Process, types, and steps.

CO3: To learn about different organizing process, Staffing, recruitment, Selection, training and span of management.

CO4: To learn about Directing process.

CO5: Understanding the process of controlling – Nature –Steps – Management by Exception

TT1CRT04: ECONOMICS AND BANKING FOR TOURISM

CO1: To know about the basics of economics

CO2: To analyse the economic impact of tourism and the economic changes in India.

CO3: To familiarize with cost analysis , cost Concept and Reduction

CO4: To familiarize with bank and banking activities

CO5: Understanding of modern Technologies used in banking

SEMESTER II : TT2CRT05 : TOURISM PRINCIPLES AND PRACTICES

CO1: To learn about the historic development of tourism industry in different periods

CO2: To learn about personal traits which affect travel an tourism.

CO3: To understand the dynamics of tourism businesses and its impacts.

CO4: To elucidate the application of tourism theories to the pragmatic developmental· agenda in world.

CO5: To familiarize with present profile of Indian Tourism.

· To examine the role of organizations in promoting travel and tourism industry in India.

TT2CRT06: GEOGRAPHY FOR TOURISM

CO1: To learn about geographical nature of tourism

CO2: To understand about various geographical factors which promote the tourism.

CO3: To familiarize with geography of India including different natural attractions. physical tourism .features, topography and drainage, forest wealth etc

CO4: To understand about different technologies used in finding a destination in travel

TT2CRT07: ACCOUNTING AND FINANCE FOR TOURISM

CO1: To know the basic concept of accountancy and finance and its relation to tourism.

· To know about the application of financial management in tourism industry

CO2: To integrate and use the concept of accounting and financial management in tourism.

· Understanding of classification of accounting and importance of accounting in tourism industry

CO3: To be able to prepare financial accounts of a business.

CO4: To be able to understand the key facts of financial management.

TT2CRT08: TOURISM RESOURCES OF KERALA

CO1: To learn about mythological origin of Kerala in different periods.

CO2: To study in brief important Tourist destinations in Kerala as well as the rich cultural heritage of the state.

CO3: To know about the geographical advantage of Kerala.

CO4: To know about Rituals, customs and Traditions of Kerala.

CO5: To learn about basic details of Kerala with Tourist attractions of each Districts

SEMESTER III : TT3CRT09: TOURISM PRODUCTS

CO1: To learn about Concept, types and characteristics of tourism products, elements of tourism products.

CO2: To familiarize different types of tourism resources of India.

CO3: To learn about religions and its impact in Tourism in India

CO4: Understanding of various performing arts and fairs and festivals in India.

CO5: Understanding of natural Tourist resources in India.

TT3CRT10: TOURISM POLICY AND PLANNING

CO1: To learn about policy making and planning in tourism.

CO2 : To understand about tourism Planning Process and its importance of planning, in International Level, National Level, Regional Level

CO3: Understanding of planning in economic, social and cultural, environmental Political sectors.

To learn about the importance of Private Sector Investment in Tourism Industry (Travel Agency, Airlines, Hotels)

CO4: To know about Tourism & Five Year Plans(from 10th plan onwards) and introduction of Neethi ayog in India.

TT3CRT11: TRANSPORTATION MANAGEMENT

CO1: To learn about different means of transport and its development

CO2: Understanding of various surface Transportation system in India such as road and rail.

· Understanding of general information about Indian Railways with brief history.

CO3: To familiarize with Airport Layout.

· To examine role of air transportation in promoting tourism in India.

CO4: To understand about water Transportation with brief history.

· To examine role of water transport in promoting tourism in India.

CO5: To familiarize with the term logistics management and its Origin.

· Understanding of Importance and the need of Supply Chain in tourism.

TT3CRT12 MANAGEMENT INFORMATION SYSTEM FOR TOURISM

CO1: To introduce the students about management information system.

· To know about the scope of MIS in this era.

CO2: To learn the structure and classification of MIS

· To familiarize with financial marketing and human resource information system

CO3: To know about the elements of a system and other system concepts.

· To understand the term information, Types , kinds of system – Boundary.

CO4: To know about data base.

· Get an idea on how to manage the database system.

TT3CRT13: STRATEGIC TOURISM MANAGEMENT AND ENTREPRENEURIAL DEVEL OPMENT

CO1: To know about who is a n Types of entrepreneur

· To know about the competencies required for a successful entrepreneur –

CO2: To learn about Small scale entrepreneur and its characteristics and relevance

To understand about the role of entrepreneurships in SSE and economic development .

CO3: Understanding of financial management issues in SSE

· To know how to manage asset and liabilities

· To introduce the concept of family enterprise – definition, issues and problems, strategies

CO4: To learn about the concept nature and characteristics of strategic decision

· To know about the benefits of strategic management

CO5: Understanding of strategic management process To learn about BCCS model and SWOT analysis.

SEMESTER IV : TT4CRT14: GUIDING SKILLS FOR TOURISM

CO1: To acquire an in-depth knowledge about the profession of tour guiding and escorting.

· Students get an idea about how to organize a guiding business

CO2: Understanding of various skills required for a good guide.

· To learn about professional ethics in guiding industry.

CO3: To introduce the guest relationship management and how to manage a contingency situation while travel.

· To learn about personal discipline of guide and code of conduct.

CO4: To examine the basics of conducting tours.

TT4CRT15: TRAVEL AGENCY AND TOUR OPERATION BUSINESS

CO1: To learn about history and development of travel agency and its functions.

· Understanding of basic requirement for setting up of, travel agency.

CO2: To differentiate between travel agency and tour operations

· To learn about various travel intermediaries in tourism.

CO3; To familiarize with organization structure of a travel agency

· To acquire knowledge about activities that takes place in travel agency.

CO4: Understanding of tour operation business and different activities

CO5: Understand the types and components of tour packages and itineraries.

· Prepare domestic and international tour itineraries.

TT4CRT16: COMPUTERIZED OFFICE MANAGEMENT FOR TOURISM

CO1: To learn about basis of computer and its historical development.

· To learn about different computer generation

CO2: To know about word processing and its procedures.

CO3: To understand about spread sheet

· Understanding the work book window and its process.

CO4: Understanding of MS PowerPoint and its working principles.

TT4CRT17: BASICS OF BUSINESS COMMUNICATION

CO1: To learn about the various means of business Communication

· To familiarize with 7 C's of communication

· To learn about , business Etiquette, Technology of Business Communication

CO2: To improve the writing skill of the student.

· Students make written material regarding common subjects.

· To learn about the various method of written communication.

CO3: To learn about the different non-verbal communication and its etiquettes.

CO4: To learn about Social behavior and group behavior of a person working in tourism industry.

TT4CRT18: HUMAN RESOURCE MANAGEMENT

CO1: To understand basic concepts of human resource management;

· To know the human resource management practices and requirement of HRM in tourism

CO2: To learn the students about human resource planning

· To know about the process of HRP and requisites for successful HRP .

CO3: The students get knowledge about recruitment, selection, induction, and placement.

CO4: To learn the students about the procedures and practices for the r training and development process.

CO5: Understanding of various issues and challenges found in organizations related to labour aspects.

· To familiarize with different strategies used to manage it.

TT4OJP01: Industrial Training and Report

SEMESTER V : TT5CRT19: INDIAN CONSTITUTION AND CIVIC CONSCIOUSNESS

CO1: Student get an opportunity to know about the different aspects of Indian Constitution and its features.

· Enable the students to understand the various provision of Indian constitution.

· To impart civic consciousness among students.

CO2: To know about the Indian Administration system, Judiciary, Indian Parliament

· To familiarize with the significance of Indian President's Powers and functions

CO3: To understand the Indian Citizenship Act ,its provisions and it describe how to become a Indian citizen..

CO4: Under standing of fundamental Rights, Fundamental Duties, and Directive Principles of State Policy.

CO5: To learn about Constitutional Amendment and its Procedure and Important Amendments.

TT5CRT20: E – TOURISM

CO1: To familiarize with the concept world wide web.

· To learn about the legislation regarding for IT.

CO2: To give insights into E-business and its strategies.

· To learn how modern technology has revolutionized the travel and tourism industry.

CO3: To understand about search Engine, desktop, Laptop, Tablets, Mobile, Video, Social Media.

CO4: To know about the history and development of CRS.

· To learn about the use of internet as a tool for tourism promotion

TT5CRT21 : AIR FARES AND TICKETING

CO1: To understand about Airline Terminology and abbreviations used in airlines.

CO2: To study about Air Geography, Time calculation

CO3: To understands about the different types of passenger ticket.

CO4: Familiarization with Three letter city and airport code, airline designated code, minimum connecting time.

· Familiarization with Air tariff: currency regulation, NUC conversion factors, general rules.

· Familiarization with TIM: Passport, Visa, Custom Regulations, Health Regulations and Airport Tax, Passenger needing special attention.

CO5: Introduction to fare construction in Airlines,Air fare-types, basic elements of airfare.

· To understand about fare construction formula and basic steps using mileage principles for One Way (OW), Return Trip (RT) and Circle trip journey (CT).

TT5CRT22: ENVIRONMENTAL STUDIES ECO TOURISM AND HUMAN RIGHTS

CO1: To enrich the students on the basic concepts of eco systems and its types.

CO2: Identifying and analyzing the various causes and effects of environment pollution..

CO3: To familiarize the students on eco tourism ,its principles and various resources in India

CO4: To identifying and analyzing the measures to mitigate the environmental issues.

CO5: To educate the students on various aspects of human rights its dimension in the society.

TT5OPT01: PUBLIC RELATIONS AND TOURISM JOURNALISM

CO1: Students get an in-depth knowledge about PR and PR Ethics

· To learn about how to do PR

CO2: To get knowledge about advertising

· To study about the importance of PR in Tourism Industry

CO3: To learn about the basics of Journalism and its different technical sectors.

· To find out the various Tourism press in India.

· To know the role of TV, Radio in journalism

CO4: To get a knowledge about web Journalism and its different aspects.

· To learn how to become a journalist and their qualities.

CO5: To learn about the qualities required as a reporter

· To familiarize with different terms related to jonalism and its role in promoting tourism.

TT5OPT02: FRONT OFFICE MANAGEMENT

CO1: To know about the types of Hotels.

· To acquire knowledge about front office department

CO2: To learn about various operations that take place in front office department.

· To know about the technologies used in front office.

CO3: To familiarize with basic skill required to perform various function.

CO4: To study about organization chart.of different types of hotels.

CO5: To familiarize with various function performed by service personnels in ahotel.

· To learn about how to manage customer loyaltt%ty.

· To familiarize with Laws governing Food service Establishment.

TT5OPT03: AN INTRODUCTION TO PRINCIPLES OF TOURISM

CO1: To learn about the concept of tourism

To examine the origin and growth of tourism and development in India To describe about the factors affecting growth of modern tourism

CO2: To know about the components of tourism and elements of tourism. To learn about various travel industry network .

CO3: To familiarize with basic travel motivators

To acquire knowledge about Social, environmental, political, economic, Negative impacts of tourism

CO4: To learn about forms and types of tourism

To describe the termcarrying capacity and factors affecting carrying capacity,

CO5: To familiarize with tourism Products of India (Major Cultural, Natural and Manmade), UNESCO World heritage sites in India.

SEMESTER VI : TT6CRT23: TOURISM MARKETING

CO1: Understanding of tourism Marketing and its evolution

CO2: To familiarize with the need of marketing research

CO3 To know about how to segment market segmentation on the basis of customer perception.

· To understand the concept of marketing mix -7 Ps of marketing.

CO4: To in depth knowledge about product and its development cycle

CO5: To describe the promotional strategies used for marketing

TT6CRT24: PRINCIPLES OF INTERNATIONAL BUSINESS FOR TOURISM

CO1: To know about foreign exchange and forex in India.

· Understanding of India's Balance of Payments Problems.

CO2: To learn about the rate of exchange ,determination of rate of exchange and Purchasing Power and Parity Theory

CO3: Understanding of Exchange Control

· To learn about floating and fluctuations in Rate of Exchange .

· To familiarize with important provisions of FEMA

CO4: To learn about the globalization of markets–

· To know about export import Procedures

CO5: To understand various international Financial Institutions world wide.

TT6CRT25: HOSPITALITY MANAGEMENT

CO1: Understanding of accommodation types and forms ,Hotel concept and classification.

CO2: To learn about categorization of hotel on the basis of facilities provided (star system) and approval

CO3: To know about the important departments of hotel and its operation .

CO4: To examine the process of guest entry in a hotel and management of customer handling process.

CO5: Understanding of leading multinational and public sector hotel chains in India.

TT6CRT26: WEB DESIGNING AND ONLINE BUSINESS FOR TOURISM

CO1: To give an introduction to windows.

CO2: To learn about the history of internet

· To learn about different operating systems and software and hardware systems in computer.

CO3: To familiarize with computer Networks.

· To learn how to sent an information from one place to another.

CO4: To understand about HTML , Frames, Tables, list and links

· To familiarize with web page designing process.

TT6CRT27: MICE TOURISM

CO1: To familiarize with (MICE)

· Understanding of different types of events and characteristics of conferences/ conventions

CO2: To find out economic and social significance of conventions

· To learn how to conduct a professional meeting in tourism industry.

CO3: To know about the convention/exhibition facilities required to conduct an event.

CO4: To learn about role, responsibilities of meeting planner/ convention manager

· To know about the skill required to conduct successful events.

CO5: Understanding of various travel Industry fairs and organizations .

TT6STP02: STUDY TOUR REPOR T

Study Tour Report\Case study Report

TT6PRP01: PROJECT/DESSERTATION

COMPLEMENTARY MATHEMATICS COURSE OUTCOME

I SEMESTER : MMICMT01: PARTIAL DIFFERENTIATION, MATRICES, TRIGNOMETRY AND NUMERICAL METHODS

CO1: Determine the domain and range of functions of several variables

CO 2: Derive all higher order partial derivatives using Chain Rules

CO 3: Identify the Rank of a matrix by reducing to the Normal form

CO 4: Recognize equivalent matrices

CO 5: Examine the consistency of a system of Linear Equations

CO 6: Solve the system of both homogeneous and Non homogeneous linear equations.

CO 7: Determine Eigen space corresponds to eigen values

CO 8: Apply De Moivre's theorem

CO 9: Determine the real and imaginary part of circular and hyperbolic functions of complex variable.

CO 10: Calculate the sum of infinite trigonometric series

CO 11: Locate the root of both algebraic and transcendental equations.

CO 12: Apply 4 different numerical methods to solve an equation

II SEMESTER : MM2CMT01: INTEGRAL CALCULUS AND DIFFERNTIAL EQUATIONS

CO1: Determine volumes of solids in several methods

CO2: Calculate the arc length of the curve

CO3: Apply various methods to find out areas of surfaces

CO4: Represent regions by inequalities

CO5: Determine areas and volumesCO1: Differentiate and identify different methods for solving differential equations

CO6: Recognize the exact differential equations using multiple integrals

CO7: Apply the method of solving Linear equations for Bernoulli's equations

CO8: Represent 3 Dimensional surfaces and curves in partial differential equations

CO9: Solve partial differential equations

III SEMESTER : MM3CMT01: VECTOR CALCULUS, ANALYTIC GEOMETRY AND AB STRACT

ALGEBRA

CO1: Determine tangent and normal vector of a vector valued function

CO2: Calculate Curvature and Normal vector

CO3: Apply properties of Directional derivatives of a function

CO4: Evaluate line integrals over a space curve

CO5: Apply integral in vector field to calculate Mass Moment of a solid

CO6: Determine the physical properties such as Work done, Flux across a curve

CO7: Discriminate conservative and non conservative fields

CO8: Apply Green's Theorem, Stoke's Theorem

CO9: Evaluate surface area and surface integral in parametric form

CO10: Represent conic sections in standard form

CO11: Determine the equation and position of conics after shifting

C012: Compare Polar system and Cartesian system

CO13: Distinguish Commutative and non commutative groups

CO14: Recognize geometry of finite groups

CO15: Draw lattice diagram of subgroups

CO16: Illustrate the permutation group with symmetries of n-gon

IV SEMESTER : MM4CMT01: FOURIER SERIES, LAPLACE TRANSFORM AND COM PLEX ANALYSIS

CO1: Represent Periodic function in a trigonometric series

CO2: Deduce many numerical series

CO3: Solve differential equations in Power series method

CO4: Determine Legendre polynomials

CO5: Convert time domain functions to frequency domain

CO6: Apply Laplace Transform to solve differential equations

CO7: Integrate and Differentiate Laplace transform of a function

CO8: Distinguish the analyticity of a complex function

CO9: Express the complex numbers and functions into real and imaginary part

CO10: Evaluate line integrals of a complex function

CO11: Apply Cauchy's Theorem and Cauchy's Formula to find out the integral of a complex function

CO12: Find out the derivate of an analytic function

COMPLEMENTARY POLITICAL SCIENCE COURSE OUTCOME

I & III SEMESTER BA HISTORY

PS3CMT01 AN INTRODUCTION TO POLITICAL SCIENCE

Students will get acquainted with

CO 1: Political concepts and nature and scope of the discipline

CO 2:. Role of states in globalised era

CO 3: Political ideologies like liberalism, Gandhism etc

CO 4: Concepts like Liberty, Equality, justice etc

CO 5: The importance of sustaining Indian parliamentary system of government

II & IV SEMESTER BA : PS4CMT05 INDIAN CONSTITUTION AND SOCIAL ISSUES IN INDIA

Students will understand

CO 1: The importance of possessing a constitution and its relevance in a democratic country.

CO 2: Features of Indian Constitution

CO 3: Importance of Decentralisation in a quasi-federation like India

CO 4: Civic-responsibility and civic values

COMMON COURSE (HINDI) - COURSE OUTCOME

I SEMESTER : HN1CCT01: PROSE AND ONE ACT PLAYS (FOR B. A/ B. Sc)

CO 1: To enable students to learn Hindi Language for effective communication.

CO 2: To create awareness regarding culture and social responsibility.

HN1CCT02: PROSE AND MASS MEDIA (FOR B.COM.)

CO 1. To provide the learner in depth knowledge of Hindi Language and Literature.

CO 2. To create interest in students towards appreciation of literature and thereby develop their aesthetic sense.

II SEMESTER : HN2CCT01: SHORT STORIES AND NOVEL (FOR B. A/ B. Sc)

CO 1: To create interest in students towards appreciation of literature and thereby developed there aesthetic sense.

CO 2: To enable the student to learn Hindi language for effective communication.

CO 3: To make the students aware about the environment human rights and gender issues.

CO 4: To create awareness regarding culture and social responsibility.

HN1CCT02: POETRY, COMMERCIAL CORRESPONDENCE ANDTRANSLATION

(FOR B.COM.)

CO 1: To make the students aware about the environment human rights and gender issues.

CO 2: To equip the students to become competent professionals in fields of media, translation, correspondence, language teaching, administration etc

CO 3: To develop the art of translation.

CO 4: To develop competency in practical implementation functional Hindi in the fields of administration, Science and Technology.

CO 5: To make the learner competent in the use of Hindi as the official language.

III SEMESTER : HN3CCT01: POETRY, GRAMMER AND TRANSLATION
(FOR B. A/ B. Sc)

CO 1: To make the students aware about the environment human rights and gender issues

CO 2: To familiarize the learners with practical use of grammar.

CO 3: To equip the students to become competent professionals in the fields of media, translation, correspondence, language teaching, administration etc.

CO 4: To develop the art of translation.

CO 5: To make the learner competent in the use of Hindi as the official language.

CO 6: The literary sensibility of the students will improve through grammatical study of Hindi.

CO 7: To develop competency in practical implementation of functional Hindi in the fields of Administration Science and Technology

IV SEMESTER : HN4CCT01: DRAMA AND LONG POEM (FOR B. A/ B. Sc)

CO 1: The language skills and literary known how will enhance their knowledge.

CO 2: To create awareness regarding culture and social responsibility.

CO 3: It will also motivate the students to acquire proficiency in the National language and official language Hindi ideal for everyday life.

COURSE OUTCOME MALAYALAM COMMON COURSE

BA/BSC SEMESTER 1 COMMON COURSE

ML1CCT01 KADHASAHITHYAM

CO1 To acquaint students with modern poetic literature

CO 2 To create among the students critical reading and appreciation of Malayalam poetry.

CO 3 Gaining knowledge of the evolution of Malayalam poetic literature

CO 4 To familiarize the students how changes in society and life experiences reflect in creative writing.

BCOM SEMESTER 1 COMMON COURSE

ML1CCT05 KADHAYUM KAVITHAYUM

CO 1 To acquaint students with modern poetic literature

CO 2 To create among the students critical reading and appreciation of Malayalam poetry.

CO 3 Gaining knowledge of the evolution of Malayalam poetic literature

CO 4 To familiarize the students how changes in society and life experiences reflect in creative writing.

BA/BSC SEMESTER 2 COMMON COURSE

ML2CCT02 KAVITHA

CO 1 To acquaint students with modern poetic literature

CO 2 To create among the students critical reading and appreciation of Malayalam poetry.

CO 3 Gaining knowledge of the evolution of Malayalam poetic literature

CO 4 To familiarize the students how changes in society and life experiences reflect in creative writing.

BCOM SEMESTER 2 COMMON COURSE

ML2CCT06 AADMAKADHA, LEGHANAM

CO1 The course is designed to appreciate the strength and beauty of Malayalam proses.

CO 2 Develop appropriate and impressive writing skills of students for various contexts

BA/BSC SEMESTER 3 COMMON COURSE

ML3CCT03 DRISHYAKALASAHITHYAM

CO 1 To familiarize the students the strength and potentials of visual arts of Kerala.

CO 2 Gain knowledge of cinema ,as visual art and understand its evolution and social relevance

BA/BSC SEMESTER 4 COMMON COURSE

ML4CCT04 MALAYALA GADYARACHANAKAL

CO 1 To know contemporary Malayalam prose writers and their themes and vision of the society

CO 2 To learn the Malayalam writers and the society that molded them

CO 3 Critical reading and appreciation of Malayalam proses.

ST. THOMAS COLLEGE, RANNI

DEPARTMENT OF ZOOLOGY

Programme Outcomes (PO),
Programme Specific Outcomes (PSO)
&
Course Oucomes (CO)

B.Sc Zoology Model - I

SEMESTER II

ZY2CMT02- CHORDATE DIVERSITY

The students should :-

CO 1: Observe the diversity in chordates and their systematic position

CO 2: Aware of the economic importance of Chordates

CO 3: Learn the physiological and anatomical peculiarities of Vertebrate phyla through type study.

CO 4: Generate curiosity in Vetrebrates living around them

SEMESTER III

ZY3CMT03-PHYSIOLOGY AND IMMUNOLOGY

CO 1: Appreciate the correlation between structure and function of organisms

CO 2: Aware of the health related problems, their origin and treatment

CO 3: Understand how efficiently our immune system work in the body

CO 4: Know about preventing common diseases rather than curing

SEMESTER IV ZY4CMT04-APPLIED ZOOLOGY

CO 1: Acquire basic knowledge and skills in applied branches of Zoology

CO 2: Understand the technology for utilising ecofriendly organisms around them for beneficial purpose

CO 3: Equip with self employment opportunities with scientific knowledge to perform profitably and confidently

B.Sc. ZOOLOGY MODEL I

Programme outcome (PO)

Students will acquire

PO 1. Basic knowledge of various disciplines of Zoology and General biology meant both for a graduate terminal course and for higher studies.

PO 2. The programme enable students to inculcate interest in and love of nature with its myriad living creatures.

PO 3. Understand the unity of life with the rich diversity of organisms and their ecological and evolutionary significance.

PO 4. Acquire basic skills in the observation and study of nature, biological techniques, experimental skills and scientific investigation.

PO 5. Acquire basic knowledge and skills in certain applied branches to enable them for self employment.

PO 6. Impart awareness of the conservation of the biosphere.

Programme Specific Outcome (PSO)

The programme helps to

PSO 1- Identify and list out common animals

PSO 2- Explain various physiological changes in our bodies

PSO 3- Analyze the impact of environment on our bodies

ZY6CBT04 – NUTRITION, HEALTH AND LIVESTYLE MANAGEMENT

CO 1: Understand general concept of health and wellness.

CO 2: Know principles of nutrition and its role in health.

CO 3: Familiarize with food safety, food laws and regulations.

CO 4: Familiarize life style diseases.

CO 5: Value of good life style practices, physical fitness and healthy food habits.

COMPLEMENTARY COURSE

SEMESTER I

ZY1CMT01-NON-CHORDATE DIVERSITY

CO 1: Study the scientific classification of invertebrate fauna

CO 2: Learn the physiological and anatomical peculiarities of invertebrate phyla through type study.

CO 3: Learn the unity of life with rich diversity of organisms and evolutionary significance of invertebrate fauna

CO 4: Generate curiosity in the biota living around them

CO 3: Knowledge on fundamental aspects of basic biology of bacteria and viruses

CO 4: Familiarize the role of immunology in human health and well – being.

ZY6CRT11 – BIOTECHNOLOGY, BIOINFORMATICS & MOLECULAR BIOLOGY

The students should :-

CO 1: Acquire intensive and in depth learning in the field of biotechnology.

CO 2: Familiarise with emerging field of biotechnology practices and approaches.

CO 3: Know about the applications in medical, industrial, environmental agricultural and nano-medicine.

CO 4: Familiarize with public policy, biosafety and intellectual property rights issues related to biotechnology.

CO 5: Study structural and functional details of basic unit of life at the molecular level.

ZY6CRT12 OCCUPATIONAL ZOOLOGY

CO 1: Equip with self employment capabilities.

CO 2: Know about profitable farming.

CO 3: Aware of cottage industries.

PSO 4- Understand various genetic abnormalities

PSO 5- Develop respect for nature

PSO 6- Explain the role and impact of different environmental conservation programmes

PSO 7- Identify animals beneficial to humans

PSO 8- Identify various potential risk factors to health of humans

PSO 9- Explain the importance of genetic engineering

Coursec Outcome (CO)

SEMESTER I

ZY1CRT01 - GENERAL PERSPECTIVES IN SCIENCE & PROTISTAN DIVERSITY

CO 1: Have awareness about the basic philosophy of science, its history, concepts and scope.

CO 2: Develop proper scientific mind, culture and work habits.

CO 3: Get familiarized with the basic tools and techniques of scientific study with emphasis on biological sciences.

CO 4: Have knowledge on different phylums of Protista with examples, helps us to identify various disease causing organisms, parasites and their stages of life cycle, that cannot be observed with naked eye.

SEMESTER II

ZY2CRT02 - ANIMAL DIVERSITY - NON CHORDATA

CO 1: Be able to scientifically classify invertebrate fauna.

CO 2: Have knowledge about the physiological and anatomical peculiarities of some invertebrate phyla through type study.

CO 3: Know evolutionary significance of various invertebrate fauna.

CO 4: Be curious about the living things around them.

SEMESTER III

ZY3CRT03 - ANIMAL DIVERSITY – CHORDATA

CO 1: Observe the diversity in chordates and their systematic position.

CO 2: Be aware of the economic importance of various classes of Chordates

CO 3: Have knowledge about the physiological and anatomical peculiarities of some vertebrate phyla through type study.

CO 4: Be aware of the evolutionary importance of different classes of organisms.

OPEN COURSE

ZY5OPT02 – PUBLIC HEALTH AND NUTRITION

CO 1: Aware the real sense of health

CO 2: Understand the role of balanced diet in maintaining health

CO 3: Practice yoga and meditation in day to day life.

SEMESTER VI

ZY6CRT09 – DEVELOPMENTAL BIOLOGY

The students should :-

CO 1: Understand the structure and function of reproductive organs.

CO 2: Know about various stages involved in development of embryos.

CO 3: Acquire knowledge about embryology of frog, chick and humans

CO 4: Have the knowledge on experimental methods and designs that can be used for future studies and research in embryology,teratology and developmental defects..

ZY6CRT10 MICROBIOLOGY & IMMUNOLOGY

CO 1: Understand the microbial world, its structure and function.

CO 2: Know about various microbial infections and their epidemiology

CO 6: Obtain basic knowledge on animal behavioural patterns and their role.

CO 7: The social organization in insects and mammals.

CO 8: Understand about the distribution of animals on earth, its pattern, evolution and causative factors.

ZY5CRT08 – HUMAN PHYSIOLOGY, BIOCHEMISTRY AND ENDOCRINOLOGY

The students should :-

CO 1: Be able to explain the basic principles of biochemistry.

CO 2: Understand the metabolism of various biological molecules.

CO 3: Know about the organs, their structure and function associated with different systems in human body.

CO 4: Be able to illustrate different kinds of food, their structure, function and metabolism.

CO 5: Be able to explain various aspects of physiological activities of animals with special reference to humans.

CO 6: Understand hormonal regulation of physiological processes in invertebrates and vertebrates

CO 7: Be familiar with hormonal regulation of physiological systems in several invertebrate and vertebrate systems

SEMESTER IV

ZY4CRT04 - RESEARCH METHODOLOGY, BIOPHYSICS AND BIOSTATISTICS

CO 1: Be familiar with basic concept of scientific method in research process.

CO 2: Have knowledge on various research designs, research communication and scientific documentation.

CO 3: Be aware about the laws and ethical values in biology.

CO 4: Be equipped with basic techniques of animal rearing collection and preservation.

CO 5: Apply statistical methods in biological studies.

SEMESTER IV

ZY4CRP04 – ANIMAL DIVERSITY – CHORDATA, RESEARCH METHODOLOGY, BIOPHYSICS AND BIOSTATISTICS

CO 1: Identify and classify organisms to their respective taxa.

CO 2: Develop skill on scientific drawing and dissections

CO 3: Be able to identify organisms using taxonomic keys

CO 4: Identify the different bones of bird and rabbit

CO 5: Be equipped with basic techniques of animal rearing collection and estimation.

CO 6: Know about the working principle and uses of different instruments used in the laboratory.

CO 7: Use computer applications for various biological and statistical uses.

SEMESTER V

ZY5CRT05 – ENVIRONMENTAL BIOLOGY AND HUMAN RIGHTS

CO 1: Have knowledge on the basic concepts of environmental sciences, ecosystems, natural resources, population, environment and society.

CO 2: Be aware of natural resources, their protection, conservation, and the factors polluting the environment, their impacts and control measures.

CO 3: Know about the basic concepts of toxicology, their impact on human health and remedial measures.

CO 4: Be conscious about biodiversity, environmental issues and conservation strategies.

CO 5: Develop the real sense of human rights – its concepts & manifestations

ZY5CRT06 – CELL BIOLOGY AND GENETICS

CO 1: Understand the structure and function of the cell, fundamental unit of life.

CO 2: Be aware of different cell organelles, their structure and role in living organisms

CO 3: Have knowledge about cell signalling and cell division.

CO 4: Know about the central role of genes and their inheritance in the life of all organisms.

CO 5: Be familiar with chromosomal theory of sex determination, linkage and recombination.

CO 6: Identify and understand the different genetic abnormalities and mutations.

ZY5CRT07–EVOLUTION,ETHOLOGY & ZOOGEOGRAPHY

CO 1: Know about the evolutionary history of earth – living and non living

CO 2: Understand about evolutionary concepts and theories

CO 3: Know the mechanism and factors affecting evolution.

CO 4: Acquire knowledge about species, speciation and various mechanisms involved in development of new species.

CO 5: Know the origin of earth and various organism and how humans evolved.