



t: 04142 213166

பெரியார் கலைக் கல்லூரி PERIYAR ARTS COLLEGE

Devanampattinam, Cuddalore - 607 001

(A Higher Educational Institution run by the Government of Tamilnadu)

Affiliated to Annamalai University, Annamalainagar

www.pacc.in

: principal@pacc.in

2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website.

Periyar Arts College, affiliated with Annamalai University in Annamalai Nagar, Tamil Nadu, adheres to a curriculum established by the university's Board of Studies. The Programme Outcomes (POs) and Course Outcomes for all undergraduate and postgraduate courses are defined by the respective Boards of Studies and are included in the curriculum documentation. In accordance with current educational standards, the syllabi are universally structured by the Tamil Nadu State Council for Higher Education (TANSCHE) and are mandated to be followed by all state universities within Tamil Nadu.

Programme Outcomes (POs) delineate the essential knowledge, skills, and attitudes that students are expected to acquire and demonstrate upon completion of a programme. In contrast, Learning Objectives, often referred to as Course Objectives, articulate the specific goals of a course, detailing the demonstrable skills or knowledge students are anticipated to gain through instruction. Course Outcomes (COs) further specify the expected achievements by students at the conclusion of a course, facilitating the assessment and measurement of Learning Objectives. Collectively, POs, Learning Objectives, and COs form a cohesive framework for evaluating educational effectiveness and student performance.

The curriculum follows the Choice Based Credit System (CBCS), a progressive educational framework that empowers students to select elective courses across various departments, thereby enhancing their learning experience in higher education. This system promotes personalized academic pathways, allowing individuals to tailor their studies according to their interests and career aspirations.

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Furthermore, the integration of Outcome-Based Education (OBE) methodology ensures that the teaching approach is aligned with specific learning outcomes, fostering an environment of accountability and continuous improvement in educational quality. The POs and COs of all the courses are uploaded to the institution's website https://www.pacc.in and their importance is given by the respective subject teachers. In the existing curriculum, the syllabi of each course consist of five units and prescribed teaching hours are also allotted per week. At the end of the each course the PO/CO s will be mentioned. Core course, Elective course, non-major elective and Naan Mudhalvan Skill development course are mandatory for each programme.

Teachers should complete syllabus with in stipulated time. Each course, Theory, Practical and Project/Internship/Field work shall be evaluated for a maximum of 100 marks. For both the theory and practical courses, CIA Tests will carry 25% and the ESE 75% of the marks. To support slow learners, remedial classes will be provided, concurrently, advanced learners are encouraged to participate in various competitive examinations, such as TNPSC, UPSC, SET, and NET, to further their academic and career opportunities. Additionally, our Placement and Career Guidance Cell has organized specialized classes designed to equip students with the knowledge and strategies required for success in these competitive assessments. Feedback is systematically collected from students, teachers, and alumni through both online and offline modalities to evaluate the strengths and weaknesses of the courses offered.

Cuddalore



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This critical assessment serves to inform the enhancement of Programme Outcomes (PO) and Course Outcomes (CO), ensuring alignment with the current educational landscape. By addressing these insights, the institution can better facilitate student welfare and achievement of desired learning outcomes, thereby preparing graduates to meet contemporary challenges effectively.

Certified that the evidences for the above are given in the page number 1-52



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PROGRAMME OUTCOMES



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PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES

UG: BOTANY

Programme Outcomes:

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive know and understanding of one or more disciplines that form a part of an undergra Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO4: Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life

PO5: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation

PO7: Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common caus and work efficiently as a member of a team

PO8: Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.

PO9: Reflective thinking: Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society.



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UG: CHEMISTRY

Programme Outcomes:

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO4: Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.

PO5: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation

PO7: Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team



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UG. COMMERCE

Programme Outcomes:

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO4: Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of nonfamiliar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.

POS: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating: Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation

PO7: Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team PO8: Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.



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UG: COMPUTER APPLICATIONS (B.C.A)

PROGRAMME OUTCOMES (PO) of BCA

- Scientific aptitude will be developed in Students
- Students will acquire basic Practical skills & Technical knowledge along with domain knowledge of different subjects in the Computer Science & humanities stream.
- Students will become employable; Students will be eligible for career opportunities in education field, Industry, or will be able to opt for entrepreneurship.
- Students will possess basic subject knowledge required for higher studies, professional and applied courses.
- Students will be aware of and able to develop solution oriented approach towards various Social and Environmental issues.
- Ability to acquire in-depth knowledge of several branches of Computer Science and aligned areas. This Programme helps learners in building a solid foundation for higher studies in Computer Science and applications.
- The skills and knowledge gained leads to proficiency in analytical reasoning, which can be utilized in modelling and solving real life problems.
- Utilize computer programming skills to solve theoretical and applied problems by critical understanding, analysis and syn thesis.
- Torecognizepatternsandtoidentifyessentialandrelevantaspectsofproblems.
- Abilitytoshareideasandinsightswhileseekingandbenefittingfromknowledgeand insightofothers.
- Mouldthestudentsintoresponsiblecitizensinarapidlychanginginterdependent
- Theaboveexpectationsgenerallycanbepooledinto6 broad categories and can be modified according to institutional requirements: PO1:Knowledge

PO2:ProblemAnalysis

PO3:Design/Development of Solutions

PO4:ConductinvestigationsofcomplexproblemsPO5:Modern toolusage



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UG: COMPUTER SCIENCE

PROGRAMME OUTCOME, PROGRAMME SPECIFIC OUTCOME AND COURSE OUTCOME

Computer Science is the study of quantity, structure, space and change, focusing on problem solving, application development with wider scope of application in science, engineering, technology, social sciences etc. The key core areas of study in Mathematics include Algebra, Analysis (Real & Complex), Differential Equations, Geometry, and Mechanics. The

Students completing this programme will be able to present Software application clearly and precisely, make abstract ideas precise by formulating them in the Computer languages. Completion of this programme will also enable the learners to join teaching profession, enhance their employability for government jobs, jobs in software industry, banking, insurance and investment sectors, data analyst jobs and jobs in various other public and private enterprises.

PROGRAMME OUTCOME:

- Scientific aptitude will be developed in Students
- > Students will acquire basic Practical skills & Technical knowledge along with domain knowledge of different subjects in the Computer Science & humanities stream.
- > Students will become employable; Students will be eligible for career opportunities in education field, Industry, or will be able to opt for entrepreneurship.
- > Students will possess basic subject knowledge required for higher studies, professional and applied courses.
- Students will be aware of and able to develop solution oriented approach towards various Social and Environmental issues.
- > Ability to acquire in-depth knowledge of several branches of Computer Science and aligned areas. This Programme helps learners in building a solid foundation for higher studies in Computer Science and applications.
- > The skills and knowledge gained leads to proficiency in analytical reasoning, which can be utilized in modelling and solving real life problems.
- > Utilize computer programming skills to solve theoretical and applied problems by critical understanding, analysis and synthesis.
- To recognize patterns and to identify essential and relevant aspects of problems.



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PSO8: Develop a range of generic skills helpful in employment, internships& societal

PSO9: Get adequate exposure to global and local concerns that provides platform for further exploration into multi-dimensional aspects of computing sciences.

PG: COMPUTER SCIENCE

Programme Outcomes (Pos)

PO1: Problem Solving Skill

Apply knowledge of Management theories and Human Resource practices to solve business problems through research in Global context.

PO2: Decision Making Skill

Foster analytical and critical thinking abilities for data-based decision-making.

PO3: Ethical Value

Ability to incorporate quality, ethical and legal value-based perspectives to all organizational activities.

PO4: Communication Skill

Ability to develop communication, managerial and interpersonal skills.

PO5: Individual and Team Leadership Skill

Capability to lead themselves and the team to achieve organizational goals.

PO6: Employability Skill

Inculcate contemporary business practices to enhance employability skills in the competitive environment.

PO7: Entrepreneurial Skill

Equip with skills and competencies to become an entrepreneur.

PO8: Contribution to Society

Succeed in career endeavors and contribute significantly to society.

PO 9 Multicultural competence

Possess knowledge of the values and beliefs of multiple cultures and a global perspective.

PO 10: Moral and ethical awareness/reasoning

Ability to embrace moral/ethical values in conducting one's life.

Programme Specific Outcomes (PSOs)

PSO1 - Placement

To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, beliefs and apply diverse frames of reference to decisions and actions.

PSO 2 - Entrepreneur



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UG: ECONOMICS

Programme Outcomes:

PO1: Knowledge of Economics: Ability to understand Economic Theories and functioning of Economic Models. To develop an adequate competency in the Economic Theory and Methods.

PO2: Analytical Reasoning and Critical Thinking: Critically Analyze and assess the way in which economists examine the real world to understand the current events and evaluate specific proposals.

PO3: Logical Reasoning and Quantitative Ability: Ability to understand how to collect and analyse data and use empirical evidence to evaluate the validity of hypothesis, using Quantitative Methodology and conduct data analysis to interpret results.

PO4: Communication and Research Skills: Communication and Research related skills. Developing a sense of capability for relevant/appropriate inquiry and asking questions, synthesising and articulating and reporting results and to efficiently communicate thoughts and ideas in a clear and concise manner.

PO5: Gender, Environment and Sustainability: Comprehend the Environmental issues and Sustainable Development and strive to achieving economic and social equity for women and be Gender Sensitive.

PO6: Employability and Leadership Skills: Become empowered individuals to be employed in various positions in industry, academia and research and have the potential to become Entrepreneurs and take leadership roles in their chosen occupations and communities.

PO7: Social Interaction: Acquire the ability to engage in relevant conversations and have the ability to understand the views of society that would help initiate policy making.

PO8: Digital Literacy and Lifelong Learning: Capability to use ICT tools in a variety of learning situation and use appropriate software for analysis of data - Ability to acquire Knowledge situations and skills for life through self directed learning and adapt to different learning environments.



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UG: ENGLISH

PROGRAMME OUTCOMES:

PO1: Disciplinary Knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.

PO2: Critical Thinking: Capability to apply analytic thought to a body of knowledge; analyze and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO3: Problem Solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's earning to real life situations.

PO4: Analytical Reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples and addressing opposing viewpoints.

PO5: Scientific Reasoning: Ability to analyse, interpret and draw conclusions from quantitative / qualitative data; and critically evaluate ideas, evidence, and experiences from an open minded and reasoned perspective.

PO6: Self-directed & Lifelong Learning: Ability to work independently, identify and manage a project. Ability to acquire knowledge and skills, including "learning how to learn", through self-placed and self-directed learning aimed at personal development, meeting economic, social and cultural objectives.

PO7: Reflective Thing: Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society

PO8: Reading & Projects: Document their reading and interpretive practices in assignments, translation works, and independent projects.

PO9: Confidence & Effectiveness: Confidently and effectively articulate their literary and textual experiences.



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UG: HISTORY

Programme Outcomes:

PO1: Knowledge of Economics: Ability to understand Economic Theories and functioning of Economic Models. To develop an adequate competency in the Economic Theory and Methods.

PO2: Analytical Reasoning and Critical Thinking: Critically Analyze and assess the way in which economists examine the real world to understand the current events and evaluate specific proposals.

PO3: Logical Reasoning and Quantitative Ability: Ability to understand how to collect and analyse data and use empirical evidence to evaluate the validity of hypothesis, using Quantitative Methodology and conduct data analysis to interpret results.

PO4: Communication and Research Skills: Communication and Research related skills. Developing a sense of capability for relevant/appropriate inquiry and asking questions, synthesising and articulating and reporting results and to efficiently communicate thoughts and ideas in a clear and concise manner.

PO5: Gender, Environment and Sustainability: Comprehend the Environmental issues and Sustainable Development and strive to achieving economic and social equity for women and be Gender Sensitive.

PO6: Employability and Leadership Skills: Become empowered individuals to be employed in various positions in industry, academia and research and have the potential to become Entrepreneurs and take leadership roles in their chosen occupations and communities.

PO7: Social Interaction: Acquire the ability to engage in relevant conversations and have the ability to understand the views of society that would help initiate policy making.

PO8: Digital Literacy and Lifelong Learning: Capability to use ICT tools in a variety of learning situation and use appropriate software for analysis of data - Ability to acquire Knowledge situations and skills for life through self directed learning and adapt to different learning environments.



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m: principal@pacc.in

UG: MATHS

PROGRAMME OUTCOMES:

PO1: Disciplinary Knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.

PO2: Critical Thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO3: Problem Solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's earning to real life situations.

PO4: Analytical Reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples and addressing opposing viewpoints.

PO5: Scientific Reasoning: Ability to analyse, interpret and draw conclusions from quantitative / qualitative data; and critically evaluate ideas, evidence, and experiences from an open minded and reasoned perspective.

PO6: Self-directed & Lifelong Learning: Ability to work independently, identify and manage a project. Ability to acquire knowledge and skills, including "learning how to learn", through self-placed and self-directed learning aimed at personal development, meeting economic, social and cultural objectives.



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UG: MICRO BIOLOGY

Programme Outcomes:

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO4: Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familian problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.

PO5: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment

PO7: Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team



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UG: PHYSICS

PROGRAMME OUTCOMES

Programme Outcomes:

(These are mereguidelines. Faculty can create POs based on their curriculum or adopt from UGC or the University for their Programme)

PO1: Disciplinary knowledge:

Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study

PO2: Communication Skills:

Ability to express thoughts and ideas effectively in writing and orally communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully; read and write analytically and present complex information in a clear and concise manner to different groups.

PO3: Critical thinking:

Capability to apply the analytic thought to a body of knowledge; analyse and evaluate the proofs, arguments, claims, beliefs on the basis of empirical evidences; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach.

PO4: Problem solving:

Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.

PO5: Analytical reasoning:

Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

PO6: Research-related skills:

A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation

PO7: Cooperation/Team work:

Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team.

PO8: Scientific reasoning:

Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.

PO9: Reflective thinking:



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UG: POLITICAL SCIENCE

PROGRAMME OUTCOMES:

The overall objectives of the Learning Outcome –based Curriculum Framework (LOCF) for Political Science degree are:

- Provide students with learning experiences that develop broad knowledge and understanding of the key concepts in Political Science.
- Equip them with advanced knowledge and understanding for analyzing Rights and duties for citizens, public policy analysis and understanding the bilateral relations among nations.
- Nurture ability among students to apply the acquired knowledge and skills to find solutions to specific problems in the nation state.
- Develop abilities in students to come up with innovative prescriptions/solutions for the benefit of the society by diligence, leadership, teamwork and lifelong learning.
- Provide students with skills that enable them to be employable in both governmental sectors private sectors including entrepreneurship skills.

PO1: Disciplinary Knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.

PO2: Critical Thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, and beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following a scientific approach to knowledge development. Critical sensibility to lived experiences, self-awareness, and reflexivity of self and society.

PO3: Problem Solving: Capacity to extrapolate from what one has learned and apply competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge and apply one's learning to real-life situations.

PO4: Analytical Reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyse and synthesise data from a variety of sources; draw valid conclusions and support them with evidence and examples, and address opposing viewpoints.



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PSO1 - Placement

To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, beliefs and apply diverse frames of reference to decisions and actions.

PSO 2 - Entrepreneur

To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations.

Programme Specific Outcomes (PSOs)

PSO3 - Research and Development

Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.

PSO4 - Contribution to Business World

To produce employable, ethical and innovative professionals to sustain in the dynamic business world.

PSO 5 - Contribution to the Society

To contribute to the development of the society by collaborating with stakeholders for mutual benefit.

UG: PSYCHOLOGY

Programme Outcomes:

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.



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UG: PUBLIC ADM	IN	
Programme Outcomes:	PO1: Knowledge of Economics: Ability Theories and functioning of Economic Nadequate competency in the Economic Nadequate competency in the Economic Theo PO2: Analytical Reasoning and Critical Analyze and assess the way in which economic Not n	Models. To develop an ary and Methods. al Thinking: Critically admists examine the real raluate specific proposals. tive Ability: Ability to adult use empirical evidence quantitative Methodology. alls: Communication and sense of capability for estions, synthesising and efficiently communicate anner. ability: Comprehend the velopment and strive to women and be Gender and strive to women and be Gender and communities. ity to engage in relevant tand the views of society age: Capability to use ICT appropriate software for edge situations and skills dapt to different learning
Programme Specific Outcomes:	macroeconomic and monetary concepts and decision making. PSO 2: To sensitize students to various ec	conomic issues related to Economics, Sustainable pts and theories related to g. ic problems in the society



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MASTER OF SOCIAL WORK (M.S.W):

PROGRAMME OUTCOME

PO1: Professional Knowledge: Facilitate the students to learn the concepts ,history, philosophy, methods, fields of Social Work, and Social Work education.

PO2: Ethical and Professional values: Inculcate Social Work knowledge, Professional Ethics, Principles and methods to guide professional practice.

PO3: Technical and Operating Skills: Provide training in applying skills in social work practice and social work research in different fields for achieving desirable changes and development.

PO4: Competencies and Professional Behaviour - Equip to practice personal reflection and self-correction to assure continual professional development

PO5: Entrepreneurial Skills: Enhance competencies and skills for the continuous professional development to become an Entrepreneur.

PO6: Critical Thinking: Apply Critical thinking to inform and communicate professional judgement in Social Work Practice

PO7: Problem Solving: Apply knowledge of social systems and human behaviour to promote social change, problem solving in human relationships.

PO8: Communication and Implications - Competence to communicate to stakeholders and policymakers the implications of policies and policy changes.

PO9: Lifelong Learning and Development: Train professional social worker to be independent and lifelong learning in the broadest context of socio-cultural, economic, environmental, political and psychological changes in the society.

PO11: Leadership Skills: Demonstrate Leadership Skill to advocate and formulate policy for the social and economic wellbeing and social change.

PO12: Analytical Skills and Intervention: Engage, assess, intervene and evaluate dividuals, families, groups, organizations, and communities.



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UG: STATISTICS

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

PO4: Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.

Programme Outcomes: PO5: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation

PO7: Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team

PO8: Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.



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To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, beliefs and apply diverse frames of reference to decisions and actions.

PSO 2 - Entrepreneur

Programme Specific Outcomes

(PSOs)

To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations.

PSO3 - Research and Development

Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.

PSO4 - Contribution to Business World

To produce employable, ethical and innovative professionals to sustain in the dynamic business world.

PSO 5 - Contribution to the Society

To contribute to the development of the society by collaborating with stakeholders for mutual benefit.

UG: TAMIL

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices,



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UG: VISUAL COMMUNICATION

PO1: Knowledge of Economics: Ability to understand Economic Theories and functioning of Economic Models. To develop an adequate competency in the Economic Theory and Methods.

PO2: Analytical Reasoning and Critical Thinking: Critically Analyze and assess the way in which economists examine the real world to understand the current events and evaluate specific proposals.

PO3: Logical Reasoning and Quantitative Ability: Ability to understand how to collect and analyse data and use empirical evidence to evaluate the validity of hypothesis, using Quantitative Methodology and conduct data analysis to interpret results.

PO4: Communication and Research Skills: Communication and Research related skills. Developing a sense of capability for relevant/appropriate inquiry and asking questions, synthesising and articulating and reporting results and to efficiently communicate

Programme Outcomes: thoughts and ideas in a clear and concise manner.

> PO5: Gender, Environment and Sustainability: Comprehend the Environmental issues and Sustainable Development and strive to achieving economic and social equity for women and be Gender Sensitive.

> PO6: Employability and Leadership Skills: Become empowered individuals to be employed in various positions in industry, academia and research and have the potential to become Entrepreneurs and take leadership roles in their chosen occupations and communities.

> PO7: Social Interaction: Acquire the ability to engage in relevant conversations and have the ability to understand the views of society that would help initiate policy making.

> PO8: Digital Literacy and Lifelong Learning: Capability to use ICT tools in a variety of learning situation and use appropriate software for analysis of data - Ability to acquire Knowledge situations and skills for life through self directed learning and adapt to different learning environments.

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G: TAMIL	
Programme Outcomes:	PO1: Problem Solving Skill: Apply knowledge of Management theories and Human Resource practices to solve business problems through research in Global context PO2: Decision Making Skill: Foster analytical and critical thinking abilities for data-based decision-making. PO3: Ethical Value: Ability to incorporate quality, ethical and legal value-based perspectives to all organizational activities. PO4: Communication Skill: Ability to develop communication, managerial and interpersonal skills. PO5: Individual and Team Leadership Skill: Capability to lead themselves and the team to achieve organizational goals. PO6: Employability Skill: Inculcate contemporary business practices to enhance employability skills in the competitive environment. PO7: Entrepreneurial Skill: Equip with skills and competencies to become an entrepreneur. PO8: Contribution to Society: Succeed in career endeavors and contribute significantly to society. PO 9 Multicultural competence: Possess knowledge of the values and beliefs of multiple cultures and a global perspective. PO 10: Moral and ethical awareness/reasoning: Ability to embrace moral/ethical values in conducting one's life, PO 11: Leadership readiness/qualities: Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team PO 12: Lifelong learning: Ability to acquire knowledge and skills, including "Jearning how to learn",
PROGRAMME SPECIFIC OUTCOMES	PSO1: முதன்மைப் பாடங்களின் வழித் தமிழ்இலக்கிய அடிப்படையை அறிதல், இலக்கியஉட்பிரிவுகளில் (கவிதை, புதினம், சிறுகதைஉரைநடை) போன்றவற்றில் படைப்பாக்கச் சிந்தனைகளைப் பெறவைத்தல்-அதன்வழி ஆய்வு மேற்கொள்வதற்கான அடித்தளத்தை மாணவியர் பெறவைத்து உயர்கல்விக்கு வழிகாட்டுதலை உருவாக்கக் கூடியதாக அமைதல். PSO2:தற்காலத்திற்கேற்ற வகையில் கணினி இணையப்பயன்பாட்டு மின்ஊடகங்களின் அறிவை மாணவியர் பெறவைத்தல். தமிழ் இலக்கியத் தொடர்பான பிறதுறை அறிவைப்பெற இதுவாய்ப்பளிக்கின்றது. மேலும் அதன் வழிப்பன்முக நோக்கும் புத்தறிவுச் சிந்தனையும் பெற வழி வகுத்தல்.



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Programme Specific Outcomes: PSO1: To enable students to apply basic microeconomic, macroeconomic and monetary concepts and theories in real life and decision making.

PSO 2: To sensitize students to various economic issues related to Development, Growth, International Economics, Sustainable Development and Environment.

PSO 3: To familiarize students to the concepts and theories related to Finance, Investments and Modern Marketing.

PSO 4: Evaluate various social and economic problems in the society and develop answer to the problems as global citizens.

PSO 5: Enhance skills of analytical and critical thinking to analyze effectiveness of economic policies.

UG: ZOOLOGY

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

Programme Outcomes:



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COURSE OUTCOMES

SYLLABUS

I BSC PHYSICS 2023-24



(Affiliated Colleges)

203 - B.Sc. Physics

Programme Structure and Scheme of Examination (under CBCS) (Applicable to the candidates admitted from the academic year 2023 -2024 onwards)

Part	Course Code	Study Components &Course Title	Credit	Цопис	Maximum Marks		
rart	Course Code	Study Components & Course Title		Hours	CIA	ESE	Total
		SEMESTER – I					
I	23UTAML11/ 23UHINL11/ 23UFREL11	Language-I: பொது தமிழ்– I: தமிழிலக்கிய வரலாறு-1/ Hindi-I/ French-I	3	6	25	75	100
II	23UENGL12	General English – I	3	6	25	75	100
	23UPHYC13	Core – I: Properties of Matter and Acoustics	5	5	25	75	100
III	23UPHYP14	Core –II: Practical –I: Physics Practical –I (Covering 23UPHYC13)	5	4	25	75	100
111	23UCHEE15 23UCHEEP1	Elective – I Chemistry for Physical Sciences–I Chemistry for Physical Sciences Practical – I	2 1	3 2	25 25	75 75	100 100
IV	23UTAMA16	Skill Enhancement Course – 1* NME-I/ Basic Tamil – I / Advanced Tamil - I	2	2	25	75	100
	23UPHYF17	Foundation Course: Introductory Physics Total	2 23	2 30	25	75	100 800

		SEMESTER – II					
I	23UTAML21/ 23UHINL21/ 23UFREL21	Language – II: பொது தமிழ் -II: தமிழிலக்கிய வரலாறு-2/ Hindi-II/ French-II	3	6	25	75	100
II	23UENGL22	General English – II	3	6	25	75	100
III	23UPHYC23	Core – III: Heat, Thermodynamics and Statistical Mechanics	5	5	25	75	100



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	23UPHYP24	Core –IV: Practical II: Physics Practical –II(Covering 23UPHYC23)	5	4	25	75	100
	23UCHEE25	Elective-II: Chemistry for Physical Sciences-II	2	3	25	75	100
	23UCHEEP2	Chemistry for Physical Sciences Practical - II	1	2	25	75	100
		Skill Enhancement Course – 2* NME-II/ Basic Tamil – II / Advanced Tamil - II	2	2	25	75	100
IV	23USECG27	Skill Enhancement Course – 3: Internet and its Applications (Common Paper)	2	2	25	75	100
	23UNMSD01	Language Proficiency for employability: Overview of English Communication**	2	-	25	75	100
		Total	25	30			900
		SEMESTER – III					
I	23UTAML31/ 23UHINL31/ 23UFREL31	Language – III: பொது தமிழ் -III: தமிழக வரலாறும், பண்பாடும்/ Hindi-III/ French-III	3	6	25	75	100
II	23UENGL32	General English	3	6	25	75	100
	23UPHYC33	Core – V: Optics and Laser Physics	5	5	25	75	100
III	23UPHYP34	Core –VI: Physics Practical –III	5	5	25	75	100
	23UMATE35	Elective-III: Mathematics 1	3	4	25	75	100
	23UPHYS36	Skill Enhancement Course – 4: Home Electrical Installation	1	1	25	75	100
IV	23UPHYS37	Skill Enhancement Course – 5: Physics of Music	2	2	25	75	100
		Environmental Studies	-	1	-	-	-
		Total	22	30			700

		SEMESTER – IV					
I	23UTAML41/ 23UHINL41/ 23UFREL41	Language – IV: பொது தமிழ் -IV: தமிழும் அறிவியலும்/ Hindi-IV/ French-IV	3	6	25	75	100
II	23UENGL42	General English	3	6	25	75	100
III	23UPHYC43	Core – VII: Core Industry Module - Electricity, Magnetism and Electromagnetism	5	5	25	75	100
	23UPHYP44	Core –VIII: Physics Practical –IV	5	5	25	75	100
	23UMATE45	Elective-IV: Mathematics 2	3	3	25	75	100



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		Total	25	30			800
	23UEVSG48	Environmental Studies	2	1	25	75	100
IV	23UPHYS47	Basic Instrumentation Skill	2	2	25	75	100
13.7		Skill Enhancement Course – 7:					
	230PH 1340	Astrophysics	2	2	23	13	100
	23UPHYS46	Skill Enhancement Course – 6:	2	2	25	75	100

		SEMESTER – V					
	23UPHYC51	Core – IX: General Mechanics and Classical Mechanics	4	5	25	75	100
	23UPHYC52	Core –X: Atomic and Nuclear Physics	4	5	25	75	100
	23UPHYC53	Core –XI Analog Electronics	4	5	25	75	100
	23UPHYD54	Core –XII Project with viva-voce	4	5	25	75	100
Ш	23UPHYE55	Elective-V: Physics Practical - V	3	4	25	75	100
Ш	23UPHYE56-1 23UPHYE56-2 23UPHYE56-3	Elective-VI: Communication Physics Energy Physics Lasers and Fiber Optics	3	4	25	75	100
IV	23UVALG57	Value Education	2	2	25	75	100
1 V	23UPHYI58	Summer Internship++	2	-	25	75	100
		Total	26	30			800

		SEMESTER – VI					
	23UPHYC61	Core-XIII: Relativity and Quantum Mechanics	4	6	25	75	100
	23UPHYC62	Core –XIV: Solid State Physics	4	6	25	75	100
	23UPHYC63	Core –XV: Digital Electronics and Microprocessor 8085	4	6	25	75	100
	23UPHYE64	Elective-VII: Physics Practical VI	3	5	25	75	100
III	23UPHYE65- 1 23UPHYE65- 2 23UPHYE65- 3	Advanced Mathematical Physics Materials Science Nanoscience and Nanotechnology	3	4	25	75	100
IV	23UPHYF66	Professional Competency Skill: Problem Solving Skills in Physics, Aptitude and Reasoning	2	3	25	75	100
V	23UPHYX67	Extension Activity	1	-	100	ı	100
		Total	21	30			700
		Grand Total	142				4700



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Non-major (NME) Electives offered to other Departments

IV	23UPHYN16	Physics for Everyday Life	2	2	25	75	100
1,	23UPHYN26	Astrophysics	2	2	25	75	100

* PART-IV: NME / Basic Tamil / Advanced Tamil (Any one)

Students who have not studied Tamil upto 12th Standard and have taken any Language other than Tamil in Part-I, must choose Basic Tamil-I in First Semester & Basic Tamil-II in Second Semester. Students who have studied Tamil upto 10th & 12th Standard and have taken any Language other than Tamil in Part-I, must choose Advanced Tamil-I in First Semester and Advanced Tamil-II in Second Semester.

** The course "23UNMSD01: Overview of English Communication" is to be taught by the experts from

Naan Mudhalvan Scheme team. However, the faculty members of Department of English should coordinate with the Naan Mudhalvan Scheme team for smooth conduct of this course.

⁺⁺Students should complete two weeks of internship before the commencement of V semester.



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Semester: I Part: III Core - I

23UPHYC13 PROPERTIES OF MATTER AND ACOUSTICS

Credit: 5 Hours: 5

COURSE OBJECTIVES: Study of the properties of matter leads to information which is of practical value to both the physicist and the engineers. It gives us information about the internal forces which act between the constituent parts of the substance. Students who undergo this course are successfully bound to get a better insight and understanding of the subject.

UNIT-I ELASTICITY: Hooke's law – stress-strain diagram – elastic constants –Poisson's ratio – relation between elastic constants and Poisson's ratio – work done in stretching and twisting a wire – twisting couple on a cylinder – rigidity modulus by static torsion– torsional pendulum (with and without masses) [12 Hours]

UNIT-II BENDING OF BEAMS: cantilever— expression for Bending moment — expression for depression at the loaded end of the cantilever— oscillations of a cantilever — expression for time period — experiment to find Young's modulus — non-uniform bending— experiment to determine Young's modulus by Koenig's method — uniform bending— expression for elevation— experiment to determine Young's modulus using microscope [12 Hours]

UNIT-III FLUID DYNAMICS: Surface tension: definition – molecular forces – excess pressure over curved surface – application to spherical and cylindrical drops and bubbles – determination of surface tension by Jaegar's method–variation of surface tension with temperature [7 Hours]

VISCOSITY: Definition – streamline and turbulent flow – rate of flow of liquid in a capillary tube – Poiseuille's formula –corrections – terminal velocity and Stoke's formula – variation of viscosity with temperature [7 Hours]

UNIT-IVWAVES AND OSCILLATIONS: Simple Harmonic Motion (SHM) – differential equation of SHM – graphical representation of SHM – composition of two SHM in a straight line and at right angles – Lissajous's figures- free, damped, forced vibrations –resonance and Sharpness of resonance. [8 Hours]

Laws of transverse vibration in strings –sonometer – determination of AC frequency using sonometer –determination of frequency using Melde's string apparatus [4 Hours]

UNIT-V ACOUSTICS OF BUILDINGS AND ULTRASONICS:

Intensity of sound – decibel – loudness of sound –reverberation – Sabine's reverberation formula – acoustic intensity – factors affecting the acoustics of buildings. [5 Hours]

Ultrasonic waves: production of ultrasonic waves – Piezoelectric crystal method – magnetostriction effect – application of ultrasonic waves [5 Hours]



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TEXT BOOKS:

- 1. D. S. Mathur, 2010, Elements of Properties of Matter, S. Chand & Co.
- 2. Brijlal & N. Subrahmanyam, 2003, Properties of Matter, S. Chand & Co
- 3. D. R. Khanna & R. S. Bedi, 1969, Textbook of Sound, Atma Ram & sons
- 4. Brijlal and N. Subrahmanyam, 1995, A Text Book of Sound, Second revised edition, Vikas Publishing House.
- 5. R.Murugesan, 2012, Properties of Matter, S. Chand & Co.

REFERENCE BOOKS:

- 1. C.J. Smith, 1960, General Properties of Matter, Orient Longman Publishers
- 2. H.R. Gulati, 1977, Fundamental of General Properties of Matter, Fifth edition, R. Chand & Co.
- 3. A.P French, 1973, Vibration and Waves, MIT Introductory Physics, Arnold-Heinmann India.

WEBLINKS:

- 1. https://www.biolinscientific.com/blog/what-are-surfactants-and-how-do-they-work
- 2. http://hyperphysics.phy-astr.gsu.edu/hbase/permot2.html
- 3. https://www.youtube.com/watch?v=gT8Nth9NWPM
- 4. https://www.youtube.com/watch?v=m4u-SuaSu1s&t=3s
- 5. https://www.biolinscientific.com/blog/what-are-surfactants-and-how-do-they-work
- 6. https://learningtechnologyofficial.com/category/fluid-mechanics-lab/
- 7. http://www.sound-physics.com/
- 8. http://nptel.ac.in/courses/112104026/

COURSE OUTCOMES:

After attending the course, the student will be able to:

	CO1	Relate elastic behavior in terms of three moduli of elasticity and
\mathbf{S}		working of torsion pendulum.
ME	CO2	Able to appreciate concept of bending of beams and analyze the
		expression, quantify, and understand nature of materials.
OUTCOMES	CO3	Explain the surface tension and viscosity of fluid and support the interesting phenomena associated with liquid surface, soap films
_		provide an analogue solution to many engineering problems.
COURSE	CO4	Analyze simple harmonic motions mathematically and apply them.
5		Understand the concept of resonance and use it to evaluate the
22		frequency of vibration. Set up experiment to evaluate frequency of ac
		mains



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	CO5	Understand the concept of acoustics, importance of constructing
		buildings with good acoustics.
		Able to apply their knowledge of ultrasonics in real life, especially in
		medical field and assimilate different methods of production of
		ultrasonic waves

MAPPING WITH PROGRAM OUTCOMES:

Map course outcomes **(CO)** for each course with program outcomes **(PO)** in the 3-point scale of STRONG **(S)**, MEDIUM **(M)** and LOW **(L)**.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	S	M	M	S	M	M	S	M	S
CO2	M	S	S	S	M	M	S	M	S	S
CO3	S	M	S	M	S	S	M	S	S	S
CO4	S	S	S	S	S	M	S	M	M	M
CO5	M	M	S	S	M	S	S	S	S	M



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B.SC MATHEMATICS



(Affiliated Colleges)

201 - B.Sc. Mathematics

Programme Structure and Scheme of Examination (under CBCS)
(Applicable to the candidates admitted from the academic year 2023 -2024 onwards)

Part	Course Code	Course Code Study Components & Course Title		Hours/Week	Maximum Marks		
	Course Coue				CIA	ESE	Total
		SEMESTER – I					
	22117 AMI 117	Language – I:					

			anguage Proficiency for employability: Overview f English Communication**	2		25	75	100
			Total	25	30			800/900
ſ			SEMESTER – III					

·		SEMESTER – III					
23UTAML31 23UHINL31/ 23UFREL31	I	Language — III பொது தமிழ் -III: தமிழக வரலாறும், பண்பாடும்/ Hindi-III/ French-III	3	6	25	75	100
23UENGL32	II	English – III	3	6	25	75	100
23UMATC33		Core -V: Vector Calculus and its Applications	5	5	25	75	100
23UMATC34	1	Core- VI: Differential Equations And Applications	5	5	25	75	100
23UMATE35 23UTALE35	Ш	Elective - III: Mathematical Statistics / Accountancy- Tally	3	4	25	75	100
23UMATS36		Skill Enhancement Course- 4: Computational Mathematics-I	1	1	25	75	100
23UMATS37	IV	Skill Enhancement Course-5: PHP Programming	2	2	25	75	100
		Environmental Studies	-	1			
		Total	22	30			700
		SEMESTER – IV					
23UTAML41/ 23UHINL41/ 23UFREL41	I	Language – IV: பொது தமிழ் -IV: தமிழும் அறிவியலும்/ Hindi-IV/ French-IV	3	6	25	75	100
23UENGL42	II	English – IV	3	6	25	75	100
23UMATC43		Core - VII: Industrial Statistics	5	5	25	75	100
23UMATC44	1	Core -VIII: Elements of Mathematical Analysis	5	5	25	75	100
23UMATE45 23UTALE45	Ш	Elective - IV: Mathematical Statistics Practical using R-Programming / Accountancy-Tally Practical	3	3	25	75	100
23UMATS46		Skill Enhancement Course- 6: Android App development	2	2	25	75	100
23UMATS47	IV	Skill Enhancement Course- 7: Computational Mathematics-II	2	2	25	75	100
23UEVSG48		Environmental Studies	2	1	25	75	100
		Total	25	30			800
		SEMESTER – V					
23UMATC51		Core - IX: Abstract Algebra	4	5	25	75	100
23UMATC52	1	Core – X: Real Analysis	4	5	25	75	100
23UMATC53]	Core – XI: Fourier Series and Fourier Transform Techniques (Laplace, Fourier)	4	5	25	75	100
23UMATD54	1	Core - XII: Project with viva-voce	4	5	25	75	100
23UMATE55-1/ 23UMATE55-2/ 23UMATE55-3	ш	Elective – V: Fuzzy Sets and Fuzzy Logic/ Programming Language C / Data Structures	3	4	25	75	100
23UMATE56-1/		Elective – VI: Optimization Techniques/	3	4	25	75	100



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COLD CATEGO OF		I autono and 7 Transformed	_				
23UMATE56-2/ 23UMATE56-3		Laplace and Z Transforms/ Neural network models					
			_				
23UVALG57	IV	Value Education	2	2	25	75	100
23UMATI58	10	Summer Internship	2	-	25	75	100
		Total	26	30			800
		SEMESTER – VI					
23UMATC61	I	Core – XIII: Linear Algebra	4	6	25	75	100
23UMATC62	II	Core – XIV: Complex Analysis	4	6	25	75	100
23UMATC63	Ш	Core – XV: Mechanics	4	6	25	75	100
23UMATE64-1/ 23UMATE64-2/ 23UMATE64-3		Elective – VII: Graph Theory & Applications / Object Oriented Programming with C++ / Algorithms	3	5	25	75	100
23UMATE65-1/ 23UMATE65-2/ 23UMATE65-3		Elective – VIII: Discrete Mathematics / Introduction to Machine Learning / Programming Language Java	3	5	25	75	100
23UMATF66	IV	Professional Competency Skill: Mathematics for Competitive Examinations-I	2	2	25	75	100
23UMATX67	V	Extension Activity	1	-	100		100
		Total	21	30			700
		Grand Total	142				4500/4700

Non-major (NME) Electives offered to other Departments

IV	23UMATN16	Basic Mathematics - I	2	2	25	75	100
14	23UMATN26	Basic Mathematics - II	2	2	25	75	100

* PART-IV: NME / Basic Tamil / Advanced Tamil (Any one)
Students who have not studied Tamil upto 12th Standard and have taken any Language other than Tamil in Part-I, must choose Basic Tamil-II in First Semester & Basic Tamil-II in Second Semester.
Students who have studied Tamil upto 10th & 12th Standard and have taken any Language other than Tamil in Part-I, must choose Advanced Tamil-I in First Semester and Advanced Tamil-II in Second Semester.

^{**} The course "23UNMSD01: Overview of English Communication" is to be taught by the experts from Naan Mudhalvan Scheme team. However, the faculty members of Department of English should coordinate with the Naan Mudhalvan Scheme team for smooth conduct of this course.

 $^{^{\}leftrightarrow}$ Students should complete two weeks of internship before the commencement of V semester.



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m								
Title of the Course	ALGEBRA & TRIGONOMETRY							
Paper Number	CORE I		l -	-				
Category Core	Year I	Credits	5	Cou		23UMATC13		
	Semester I			Cod	_			
Instructional Hours	Lecture	Tutorial	Lab Prac	tice	Tota	ւl		
per week	5				5			
Pre-requisite	12th Standard M	Lathematics						
Objectives of the	 Basic ideas 	on the Theory	of Equation	ons, N		es and Number		
Course	Theory.							
	 Knowledge 	to find expansi	ons of trig	gonon	etry :	functions, solve		
		nd applied proble			-	•		
Course Outline	Unit I: Recipro	ocal Equations-St	tandard for	m–Inc	reasir	g or decreasing		
		ven equation- Re						
	_	nomials by Horn						
	or roots or pory				area p			
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	I	nation of Series: ns without proof)		•		_		
		acteristic equatio						
	I	es - Cayley — H						
		of square matrix						
	o, Diagonalizati	ion of square mat	rices - relat	ea pro	oolem	3.		
	Unit IV. France	sions of sinne, co	and in name	of	-inA -	ara Erransian		
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	terms of θ - rela)-Expansio	ns or	30000	cost and tang in		
		erbolic function	. Poleti	ion b	otarroo	n airaular and		
		erbone Tunction ections Inverse						
	problems.	tities, Summatio	n or urigo	nome	erric s	series - related		
Extended	-	4-3 4- 411		£				
Professional		ted to the abov PSC/TNPSC/c				ous competitive		
				solve	α			
Component (is a	(10 pe discusse	d during the Tuto	riai nour)					
part of internal								
component only,								
Not to be included								
in the External								
Examination								
question paper)								
Skills acquired		blem solving, an						
from this course	competency, pr	ofessional comm	unication ar	nd trai	nsfera	ble skill.		



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Recommended	 T. K. Manickavasagam, Pillay, T. Natarajan and K. S. Ganapathy, 					
Text	Algebra Volume I, S. Viswanathan (Printers & Publishers) Pvt. Ltd.,					
	Reprint 2011 (Unit I).					
	UNIT I: Chapter-VI: Sec (16-19;30)					
	UNIT II: Chapter-III and IV					
	2. T. K. Manickayasagam Pillay, T. Natarajan and K. S. Ganapathy,					
	Algebra Volume II, S. Viswanathan (Printers & Publishers) Pvt. Ltd.,					
	Reprint 2011 (Unit I).					
	UNIT III: Chapter-II					
	3. S. Narayanan, T. K. Manickavasagam Pillay, Trigonometry,					
	Viswanathan (Printers and Publishers) Pvt. Ltd., Reprint 2009					
	UNIT IV: Chapter- 3: Sec(1-5)					
	UNIT V: Chapter- 3: Sec(2-2.3; 5-5.5)					
	4. S. Narayanan, R. Hanumantha Rao, T.K. Manicavachagom Pillay and					
	Dt. P. Kandaswamy, Ancillary Mathematics, Volume-I, S. Viswanathan					
	(Printers & Publishers) Put. Ltd., 2009.					
	5. S. Arumugam & others, Trigonometry and Fourier series, New					
	Gamma Publications -1999					
Books for	1. W.S. Burnstine and A.W. Panton, Theory of equations					
Reference	2. David C. Lay, Linear Algebra and its Applications, 3rd Ed., Pearson					
	Education Asia, Indian Reprint, 2007					
	3. G.B. Thomas and R.L. Finney, Calculus, 9th Ed., Pearson Education,					
	Delhi, 2005					
	4.C. V. Durell and A. Robson, Advanced Trigonometry, Courier					
	Corporation, 2003					
	5. J. Stewart, L. Redlin, and S. Watson, Algebra and Trigonometry,					
	Cengage Learning, 2012.					
	6. Calculus and Analytical Geometry, G.B. Thomas and R. L. Finny,					
	Pearson Publication, 9th Edition, 2010.					
Website and	1. Hara Wardell and the					
e-Learning Source	https://nptel.ac.in					

Course Learning Outcome (for Mapping with POs and PSOs)

Students will be able to

- CLO 1: Classify and Solve reciprocal equations
- CLO 2: Find the sum of binomial, exponential and logarithmic series
- CLO 3: Find Eigen values, eigen vectors, verify Cayley Hamilton theorem and diagonalize a given matrix
- CLO 4: Expand the powers and multiples of trigonometric functions in terms of sine and cosine
- CLO 5: Determine relationship between circular and hyperbolic functions and the summation of trigonometric series

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B.SC

	POs	PO ₅						PSOs			
	1	2	3	4	5	6	1	2	3		
CL01	3	1	3	-	-	-	3	2	1		
CLO2	2	1	3	1	-	-	3	2	1		
CLO3	3	1	3	1	-	-	3	2	1		
CLO4	3	1	3	-	-	-	3	2	1		
CLO5	3	1	3	-	-	-	3	2	1		

CHEMISTRY

ANNAMALAI UNIVERSITY

(Affiliated Colleges)

204 - B.Sc. Chemistry

Programme Structure and Scheme of Examination (under CBCS)

(Applicable to the candidates admitted from the academic year 2023 -2024 onwards)

Part	Course Code	Study Components & Course Title	Credit	Hours/	Maximum Marks		
1 411	Course coue	study components at course Time	Creare	week	CIA	ESE	Total
		SEMESTER – I					
I	23UTAML11/ 23UHINL11/ 23UFREL11	Language – I: பொதுதமிழ் – I: தமிழிலக்கிய வரலாறு -1/ Hindi – I/ French – I	3	6	25	75	100
Ш	23UENGL12	General English – I	3	6	25	75	100
	23UCHEC13	Core – I: General Chemistry-I	5	5	25	75	100
III	23UCHEP14	Core –II: Practical - I Quantitative Inorganic Estimation (Titrimetry) and Inorganic Preparations	5	4	25	75	100
		Elective - I	3/2	5/3	25	75	100



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	23UMATE15	Mathematics-1 (or)					
	23UBOTE15	Botany – I (or)					
	23UZOOE15	Zoology – I (or)					
	23UBIOE15	Biochemistry – I					
	23UBOTEP1	Botany Practical - I (or)	1	2	25	75	100
	23UZOOEP1	Zoology Practical – I (or)					
	23UBIOEP1	Biochemistry Practical–I					
		Skill Enhancement Course – 1*					
		NME-I/	2	2	25	75	100
IV	23UTAMB16	Basic Tamil – I /	۷	۷	23	/ 5	100
	23UTAMA16	Advanced Tamil - I					
	23UCHEF17	Foundation Course : Introductory Chemistry	2	2	25	75	100
		Total	23	30			700/800

		SEMESTER – II					
I	23UTAML21/ 23UHINL21/ 23UFREL21	Language – II: பொது தமிழ் -II: தமிழிலக்கிய வரலாறு -2/ Hindi – II/ French –II	3	6	25	75	100
П	23UENGL22	General English – II	3	6	25	75	100
	23UCHEC23	Core – III: General Chemistry-II	5	5	25	75	100
	23UCHEP24	Core –IV: Practical– II Qualitative Organic Analysis and Preparation of Organic Compounds	5	4	25	75	100
III	23UMATE25	Elective - II Mathematics-II /	3	5	25	75	100
	23UBOTE25	Botany-II /	2	3	25	75	100
	23UZOOE25	Zoology-II /	2	3	25	75	100
	23UBIOE25	Biochemistry -II	2	3	25	75	100
	23UBOTEP2	Botany Practical – II /	1	2	25	75	100
III	23UZOOEP2	Zoology Practical – II/	1	2	25	75	100
	23UBIOEP2	Biochemistry Practical –II	1	2	25	75	100
IV	23UTAMB26	Skill Enhancement Course – 2* NME-II/ Basic Tamil – II /	2	2	25	75	100



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23UTAMA26	Advanced Tamil - II					
	Skill Enhancement Course – 3:					
23USECG27	Internet and its Applications	2	2	25	75	100
	(Common Paper)			25	75	
2211NIMCD01	Language Proficiency for employability:	2				100
23UNMSD01	Overview of English Communication**	2	-	25	75	100
	Total	25	30			700/800

	SEMESTER – III								
	23UTAML31/	Language – III: பொது தமிழ் -III: தமிழக வரலாறும், பண்பாடும்/	3	6	25	75	100		
	23UHINL31/ 23UFREL31	Hindi-III/ French-III							
	23UENGL32	English Course – III:	3	6	25	75	100		
	23UCHEC33	Core Course – V :General Chemistry-III	5	5	25	75	100		
	23UCHEP34	Core Course-VI-Core Practical – III- Inorganic Qualitative Analysis	5	4	25	75	100		
III	23UPHYE35	Elective-III: Physics-I	2	3	25	75	100		
	23UPHYEP3	Physics Practical-I	1	2	25	75	100		
	23UCHES36.	Skill Enhancement Course SEC-4: Entrepreneurial Skills in Chemistry	1	1	25	75	100		
IV	23UCHES37	Skill Enhancement Course-SEC-5: Pesticide Chemistry	2	2	25	75	100		
		Environmental Studies	-	1	-	-	-		
		Total	22	30			800		
		SEMESTER – IV							
- 1		Language – IV:	3	6	25	75	100		



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	23UTAML41/ 23UHINL41/ 23UFREL41	பொது தமிழ் -IV: தமிழும் அறிவியலும்/ Hindi-IV/					
		French-IV	_				
	23UENGL42	English Course – IV	3	6	25	75	100
	23UCHEC43	Core Course – VII : General Chemistry-IV	5	4	25	75	100
Ш		Core Course-VIII-Core Practical – IV:	5	4	25	75	100
	23UCHEP44	Physical Chemistry Practical					
		Elective-IV:	2	3	25	75	100
	23UPHYE45	Physics-II					
	23UPHYEP4	Physics Practical-II	1	2	25	75	100
IV		Skill Enhancement Course-SEC-6:	2	2	25	75	100
IV	23UCHES46	Instrumental Methods of Chemical analysis					
		Skill Enhancement Course-SEC-7:	2	2	25	75	100
	23UCHES47	Forensic Science					
	23UEVSG48	Environmental Studies	2	1	25	75	100
	_	Total	25	30			900

		SEMESTER – V					
	23UCHEC51	Core Course – IX: organic Chemistry-I	4	5	25	75	100
	23UCHEC52	Core Course – X :Inorganic Chemistry-I	4	5	25	75	100
	23UCHEC53	Core Course – XI: Physical Chemistry-I	4	5	25	75	100
	23UCHED54	Core course-XII-Project with viva voce	4	5	25	75	100
		Elective-V:	3	4	25	75	100
Ш	23UCHEE55-1	Bio Chemistry/					
'''	23UCHEE55-2	Green Chemistry/					
	23UCHEE55-3	Agriculture Chemistry					
		Elective –VI:	3	4	25	75	100
	23UCHEE56-1	Industrial Chemistry/					
	23UCHEE56-2	C Language and Chemistry/					
	23UCHEE56-3	Applied Chemistry					
IV	23UVALG57	Value Education	2	2	25	75	100
IV	23UCHEI58	Summer Internship ⁺⁺	2	-	25	75	100
		Total	26	30			800
		SEMESTER VI					
	23UCHEC61	Core Course –XIII: Organic Chemistry-II	4	6	25	75	100
Ш	23UCHEC62	Core Course – XIV Inorganic Chemistry-II	4	6	25	75	100
	23UCHEC63	Core Course – XV: Physical Chemistry-II	4	6	25	75	100
		Elective Course VII –	3	5	25	75	100



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	23UCHEE64-1/	Fundamentals Of Spectroscopy/					
	23UCHEE64-2/	Organic Synthesis /					
	23UCHEE64-3	Health Chemistry					
	23UCHEE65-1/	Elective Course VIII-Nano Science/	3	5	25	75	100
	23UCHEE65-2/	Polymer Science/					
	23UCHEE65-3	Pharmaceutical Chemistry					
IV		Professional Competency Skill:	2	2	25	75	100
IV	23UCHEF66	Cheminformatics					
V	23UCHEX67	Extension Activity	1	-	100		100
		Total	21	30			700
		Grand total	142				4600/4800

Non-major (NME) Electives offered to other Departments

11.7	23UCHEN16	Role of Chemistry in Daily Life	2	2	25	75	100
IV	23UCHEN26	Dairy Chemistry	2	2	25	75	100

^{*} PART-IV: NME / Basic Tamil / Advanced Tamil (Any one)

Students who have not studied Tamil upto12th Standard and have taken any Language other than Tamil in Part-I, must choose Basic Tamil-I in First Semester & Basic Tamil-II in Second Semester.

Students who have studied Tamil upto10th& 12th Standard and have taken any Language other than Tamil in Part-I, must choose Advanced Tamil-I in First Semester and Advanced Tamil-II in Second Semester.

^{**} The course "23UNMSD01: Overview of English Communication" is to be taught by the experts from Naan Mudhalvan Scheme team. However, the faculty members of Department of English should coordinate with the Naan Mudhalvan Scheme team for smooth conduct of this course.

^{**}Students should complete two weeks of internship before the commencement of V semester.



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Choice Based Credit System (CBCS), Learning Outcomes Based Curriculum Framework (LOCF) Guideline Based Credit and Hours Distribution System

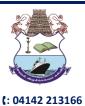
for all UG courses including Lab Hours

First Year – Semester-I

Part	List of Courses	Credit	No. of Hours
Part I	Language – Tamil	3	6
Part II	English	3	6
Part III	Core Theory, Practical & Elective Courses	13	14
	Skill Enhancement Course SEC-1 (NME-I)	2	2
Part IV	Foundation Course	2	2
		23	30

Semester-II

Part	List of Courses	Credit	No. of Hours
Part I	Language – Tamil	3	6
Part II	English	3	6
Part III	Core Theory, Practical & Elective Courses	13	14
Part IV	Skill Enhancement Course -SEC-2 (NME-II)	2	2
	Skill Enhancement Course -SEC-3 (Discipline / Subject Specific)	2	2
		23	30



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Second Year - Semester-III

Part	List of Courses	Credit	No. of Hours
Part I	Language - Tamil	3	6
Part II	English	3	6
Part III	Core Theory, Practical & Elective Courses	13	14
Part IV	art IV Skill Enhancement Course -SEC-4 (Entrepreneurial Based)		1
	Skill Enhancement Course -SEC-5 (Discipline / Subject Specific)	2	2
	E.V.S	-	1

Consolidated Semester wise and Component wise Credit distribution

Parts	Sem I	Sem II	Sem III	Sem IV	Sem V	Sem VI	Total
							Credits
Part I	3	3	3	3	-	-	12
Part II	3	3	3	3	-	-	12
Part III	13	13	13	13	22	18	92
Part IV	4	4	3	6	4	2	23
Part V	-	-	-	-	-	1	1
Total	23	23	22	25	26	21	140

^{*}Part I. II, and Part III components will be separately taken into account for CGPA calculation and classification for the under graduate programme and the other components Part IV, V have to be completed during the duration of the programme as per the norms, to be eligible for obtaining the UG degree.



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CREDIT DISTRIBUTION FOR U.G. PROGRAMME

Part	Course Details	No. of	Credit	Total
		Courses	per	Credits
			course	
Part I	Tamil	4	3	12
Part II	English	4	3	12
Part III	Core Courses	15	4/5	68
	Elective Courses: Generic / Discipline Specific	8	3	24
	(3 or 2+1 Credits)			
	Part I, II and III Credits			116
	Skill Enhancement Courses / NME / Language Courses	7	1/2	15
	Professional Competency Skill Course	1	2	2
	Environmental Scie	1	2	2
Part IV				
	nce (EVS)			
	Value Education	1	2	2
	Internship	1	2	2
	Part IV Credits			23
Part V	Extension Activity (NSS / NCC / Physical Education)	1	1	1
	Total Credits for the UG Programme		1	140



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	Methods of Evaluation		
	Continuous Internal Assessment Test		
Internal Evaluation	Assignments	25 Marks	
	Seminars		
	Attendance and Class Participation		
External Evaluation	End Semester Examination	75 Marks	
	Total	100 Marks	
	Methods of Assessment		
Recall (K1)	Simple definitions, MCQ, Recall steps, Concept definitions		
Understand/Comprehend (K2)	derstand/Comprehend (K2) MCQ, True/False, Short essays, Concept explanations, Short sumn		
	or overview		
Application (K3)	Suggest idea/concept with examples, Suggest formulae, Solve		
	problems, Observe, Explain		
Analyze(K4) Problem-solving questions, Finish a procedure in many			
	Differentiate between various ideas, Map knowledge		
Evaluate(K5)	Longer essay/Evaluation essay, Critique or justify with pros and cons		
Create(K6)	Check knowledge in specific or off beat situation	ns, Discussion,	
	Debating or Presentations		



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Programme Specific Outcomes:

On successful completion of Bachelor of Physics with Computer Applications programme, the student should be able to:

PSO1: Disciplinary Knowledge: Understand the fundamental principles, concepts, and theories related to physics and computer science. Also, exhibit proficiency in performing experiments in the laboratory.

PSO2: Critical Thinking: Analyse complex problems, evaluate information, synthesize information, apply theoretical concepts to practical situations, identify assumptions and biases, make informed decisions and communicate effectively

PSO3: Problem Solving: Employ theoretical concepts and critical reasoning ability with physical, mathematical and technical skills to solve problems, acquire data, analyze their physical significance and explore new design possibilities.

PSO4: Analytical & Scientific Reasoning: Apply scientific methods, collect and analyse data, test hypotheses, evaluate evidence, apply statistical techniques and use computational models.

PSO5: Research related skills: Formulate research questions, conduct literature reviews, design and execute research studies, communicate research findings and collaborate in research projects.

PSO6: Self-directed & Lifelong Learning: Set learning goals, manage their own learning, reflect on their learning, adapt to new contexts, seek out new knowledge, collaborate with others and to continuously improve their skills and knowledge, through ongoing learning and professional development, and contribute to the growth and development of their field.

PO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
PO1	✓					
PO2		✓				
PO3			✓			
PO4				✓		
PO5					✓	
PO6						✓



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COURSE OUTCOMES

BOTANY



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COURSE OUTCOMES

BOTANY					
SUBJECT	COURSE OUTCOMES				
PLANT DIVERSITY I	· Relate to the structural organization, reproduction and				
ALGAE	significance of algae.				
	 Demonstrate knowledge in understanding the various life 				
	cycle patterns and the fundamental concepts in algal growth				
	 Explain the benefits of various algal technologies on the 				
	ecosystem				
	 Compare and contrast the thallus organization and mode 				
	of reproduction in algae.				
	 Determine the emerging areas of Algal Biotechnology fo 				
	identifying commercial potentials of algal products and their				
	uses.				
BASICS OF BOTANY	 Increase the awareness and appreciation of human 				
	friendly algae and their economic importance.				
	 Develop an understanding of microbes and fungi and 				
	appreciate their adaptive strategies				
	 Develop critical understanding on morphology, anatomy 				
	and reproduction of Bryophytes, Pteridophytes and				
	Gymnosperm				
	· Compare the structure and function of cells and explain				
	the development of cells.				
	 Understand the core concepts and fundamentals of plant 				
	biotechnology and genetic engineering.				
FUNGI, BACTERIA,	Recognize the general characteristics of microbes, fungi				
VIRUSES, PLANT	and lichens and disease symptoms.				
PATHOLOGY AND	Develop an understanding of microbes, fungi and lichens				
LICHENS	and appreciate their adaptive strategies based on structural				
Elelleno	organization				
	Identify the common plant diseases, according to				
	geographical locations and device control measures				
	Analyze the emerging trends in fungal biotechnology with				
	special reference to agricultural and pharmaceutical				
	applications.				
	Determine the economic importance of microbes, fungi				
	and lichens.				
ORGANIC FARMING	Recognize the different forms of biofertilizers and their uses.				
	Explain and interpret the components, patterns, and processes				
	of bacteria for growth in crop production.				
	3. Apply techniques for synthesizing green manure and develop				



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BBA



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BBA				
SUBJECT	COURSE OUTCOMES			
Principles of Management	Describe nature, scope, role, levels, functions and			
rinciples of Management	approaches of management			
	2. Apply planning and decision making in management			
	 Identify organization structure and various 			
	organizing techniques 4. Understand Direction, Co-ordination & Control			
	Understand Direction, Co-ordination & Control mechanisms			
	 Relate and infer ethical practices of organisation. 			
Accounting for Managers	Prepare Journal, ledger, trial balance and cash book			
	2. Classify errors and making rectification entries			
	3. Prepare final accounts with adjustments			
	4. Pass depreciation entries and prepare depreciation			
	accounts			
	Prepare single and double entry system of			
Managerial Economics	accounting. 1. Analyze & apply the various economic concepts in			
managerial Economics	individual & business decisions.			
	Explain demand concepts, underlying theories and			
	identify demand forecasting techniques.			
	 Employ production, cost and supply analysis for business decision making 			
	4. Identify pricing strategies			
	5. Classify market under competitive scenarios.			
Business Organisation	 To introduce the concepts and forms of business organization and provide insights into advertising and stock exchange. 			
	To learn about the various forms of business organization and the process of setting a new venture entity under a country's legal-economic structure			
	 To explore the international prospects of trade and business under globalization and understand the working of different functionaries of business 			
	 To acquaint the students with the forms of business organization. 			
	5. To create the Knowledge about Business			

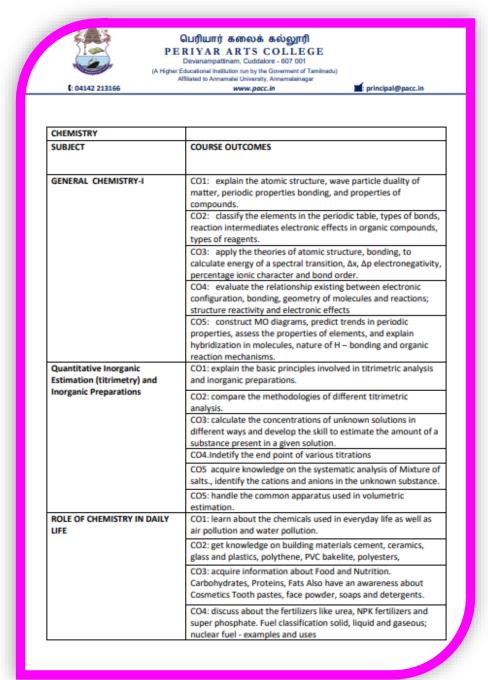


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CHEMISTRY



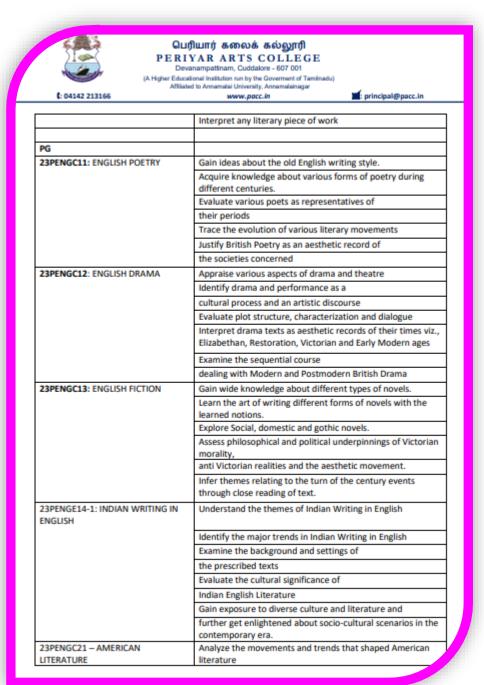


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ENGLISH





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PSYCHOLOGY

