

# **ST. THOMAS COLLEGE PALAI**

**NAAC Accredited with 'A' Grade (3rd Cycle, CGPA 3.30) in 2015**

**(Affiliated To Mahatma Gandhi University, Kottayam)**



## **PROGRAMME SPECIFIC OUTCOMES**

**(Academic Year 2018-19)**

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# UNDERGRADUATE PROGRAMMES

## BA/BSc/BCom/BVoc

### BA English Language and Literature

PSO1.	To familiarize the students with select literary works across the globe, original or in translation.
PSO2.	To inculcate in the students active interest in English Language and Literature.
PSO3.	To enable the students to speak and write good English.
PSO4.	To encourage and inspire the students into creative writing.
PSO5.	To make the students competent for different careers, home and abroad.

### BA Malayalam

PSO1.	It analyses the social and aesthetic aspects of Malayalam language and literature
PSO2.	To achieve proficiency in language
PSO3.	To lay foundation for language research

### BA Economics

PSO1.	To build a strong foundation in Economics by understanding the basic concepts, principles and theories in Economics.
PSO2.	To understand competing economic paradigms and the historical development of the discipline.
PSO3.	To analyze historical and current events from an economic perspective.
PSO4.	To develop the ability to apply the principles of Economics in everyday life.
PSO5.	To create capacity to develop solutions to various economic problems.
PSO6.	To equip the students for employment and further study in economics.

### B A History (Archaeology and Museology)

PSO1.	Integral development of individuals through historical scholarship.
PSO2.	To inculcate sense of history and heritage in the young minds and society.
PSO3.	Able to offer reasonable predictions of what will happen next in today's world.
PSO4.	To understand why some rules exist in the modern world.
PSO5.	Understand the world, cultures, changes and world events.
PSO6.	Overall awareness about our own identities, gives us insight into present day problems and solutions, builds better citizenships.
PSO7.	Student should understand academic honesty, the basic skills that historians use in research, research writing and historical analysis.
PSO8.	Articulate the diversity of human experience including ethnicity, race, language, sex, gender as well as political, economic, social and cultural structures over time and space.
PSO9.	To develop historical analysis of documents and develop an ability to think critically and historically when discussing the past.
PSO10.	Distinguish between primary and secondary sources and identify and evaluate evidence.
PSO11.	It enables an outlook on past economic and cultural trends.

PSO12.	Students will develop a strong foundation on the basic understanding of Archeology.
PSO13.	Students are familiarized with basic techniques and methods in archaeological exploration and excavation .
PSO14.	Student will also understand basis of Indian Epigraphy and Numismatics.
PSO15.	On successful completion of this course students also will have better understanding of museum documentation, exhibition and conservation.
<b>BA Political Science</b>	
PSO1.	To identify key questions, fundamental concepts, and theoretical frameworks critical to an understanding of the political theory
PSO2.	To analyse the fundamental concepts, characteristics, and theories central to comparative politics and international politics
PSO3.	To solve complex problems by demonstrating a mastery of substantive knowledge in the discipline's main subfields;
PSO4.	To follow scientific and humanistic methods to design and carry out politically-oriented research projects by utilizing sufficiently advanced social research methods
PSO5.	To communicate effectively political knowledge to general audiences as well as colleagues in the field.
<b>BA English Language and Communication Studies</b>	
PSO1.	Would formulate strategies for effective communication
PSO2.	Would analyze and describe phonological, syntactic and socio linguistic aspects of English language
PSO3.	Develop new strategies in print broad cast and web news reports
PSO4.	New avenues of Public relations are opened
PSO5.	Would develop translation skills
PSO6.	Achieve the use of English in formal and informal contexts
PSO7.	Organize and deliver relevant applications of knowledge through effective written verbal & graphical/virtual communication
<b>BSc Mathematics</b>	
PSO1.	To provide logic framework in all areas of basic mathematics
PSO2.	To attain foundation in basic mathematics
PSO3.	To learn powerful tools for tackling topics in calculus
PSO4.	To learn powerful tools for talking topics in theory of equations
PSO5.	To learn powerful tools for talking topics in geometry
PSO6.	To get an introduction to almost all areas of Mathematics
<b>BSc Physics</b>	
PSO1.	Provide a comprehensive framework of all areas of Physics.
PSO2.	Understand the concepts and significance of the various physical phenomena.
PSO3.	Apply the theories learnt and the skills acquired to solve real time problems.
PSO4.	Acquire a wide range of problem solving skills, both analytical and computational and to apply them.
PSO5.	Motivate students to higher studies and research in different areas of basic and applied Physics.
PSO6.	Enhance the student's academic abilities, personal qualities and transferable skills to develop as responsible citizens.

<b>BSc Chemistry</b>	
PSO1.	To understand and demonstrate basic concepts in Chemistry while retaining the exciting aspects of chemistry so as to develop interest in the study of chemistry as a discipline.
PSO2.	To solve the problem and also think methodically, independently and draw a logical conclusion.
PSO3.	To gain the knowledge of Chemistry through theory and practicals.
PSO4.	To develop skills in the proper handling of apparatus and chemicals.
PSO5.	To understand the basic concepts, fundamental principles, and the theories in Chemistry and their relevancies in the day-to-day life.
PSO6.	To understand good laboratory practices and safety
PSO7.	To analyse the given scientific data critically and systematically and to draw the objective conclusions
PSO8.	To find out the green methods for chemical reaction for sustainable development
PSO9.	To realize how developments in chemistry helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments.
PSO10.	To develop various communication skills such as reading, listening, speaking, etc., which we will help in expressing ideas and views clearly and effectively.
<b>BSc Botany</b>	
PSO1.	To lay a strong foundation to the study of Botany and to develop the basic skills to study Botany in detail.
PSO2.	To impart an insight into the diversity of the living world and the need to conserve it.
PSO3.	To make the students realize the applications of different fields of Botany commercially, ecologically and industrially.
PSO4.	To enable the students to appreciate the contributions of the scientific community and to develop a deep sense of research aptitude in them.
PSO5.	To enhance the skills of students in various techniques used in Botany for the collection, preservation, propagation, breeding etc.
PSO6.	To ensure that the students are equipped with expertise to make use of the opportunities and to tackle the challenges in the field of Botany.
<b>BSc Zoology</b>	
PSO1.	Identify and list out common animals
PSO2.	Explain various physiological changes in our bodies
PSO3.	Analyze the impact of environment on our bodies
PSO4.	Understand various genetic abnormalities
PSO5.	Develop respect for nature
PSO6.	Explain the role and impact of different environmental conservation programmes
PSO7.	Identify animals beneficial to humans
PSO8.	Identify various potential risk factors to health of humans
PSO9.	Explain the importance of genetic engineering
PSO10.	Use tools of information technology for all activities related to Zoology

<b>BSc Recreation, Leisure and Sports Studies.</b>	
PSO1.	Value physical activity: Be energetic, enjoy helping others in learning motor and sport skills.
PSO2.	Be willing to serve as a role model for fitness and skill development for others.
PSO3.	To advocate for the utilization of the resources needed to promote and maintain healthy behavior.
PSO4.	State, compare, manipulate, design & deduce research enquiry in recreation, Leisure & sports.
PSO5.	To identify, summarize, plan and design physical activity, exercise, yoga, teaching and coaching programme as per needs of the society.
<b>B Com (Finance and Taxation)</b>	
PSO1.	To build a strong inclination towards lifelong learning and acquiring contemporary knowledge in different areas of Commerce and Business Studies.
PSO2.	Students have a plenty of choices to pursue professional as well as Masters Programmes such as CA, M.COM, MBA, CMA, ICWA, CS, MIB, MFA etc. after completing the B. Com Programme
PSO3.	To equip students ready for employment in functional areas like accounting, auditing, taxation, banking, insurance and corporate law.
PSO4.	To attain eligibility for applying for examinations like KPSC, UPSC and other recruitment board examinations for which graduation is the basic qualification.
<b>B Com (Computer Applications)</b>	
PSO1.	Students are equipped with necessary knowledge skills and other attributes to enable them for participating in the modern business environment.
PSO2.	Developing competency in students to pursue higher level programs, such as CA, CMA or other masters programs in Commerce.
PSO3.	Students shall enhance their practical knowledge and employability through real time projects.
PSO4.	Enhance students for building entrepreneurial skills and initiating start ups
<b>BCA</b>	
PSO1.	An ability to apply knowledge of computing and mathematics appropriate to the discipline.
PSO2.	An ability to identify, formulate, and develop solutions to computational challenges.
PSO3.	An ability to design, implement, and evaluate a computational system to meet desired needs within realistic constraints.
PSO4.	An ability to function effectively on teams to accomplish shared computing design, evaluation, or implementation goals.
PSO5.	An understanding of professional, ethical, legal, security, and social issues and responsibilities for the computing profession.
PSO6.	An ability to communicate and engage effectively with diverse stakeholders.
PSO7.	An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computational systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
PSO8.	An ability to use appropriate techniques, skills, and tools necessary for computing practice.
PSO9.	An ability to apply design and development principles in the construction of software systems of varying complexity.

<b>BVoc Sustainable Agriculture</b>	
PSO1.	To propagate the ideas, practices and policies that constitutes the concept of sustainable agriculture.
PSO2.	To provide a thorough view of the consequences of farming practices on both human communities and the environment.
PSO3.	To empower the students with an economically viable, socially supportive and ecologically sound education on agriculture.
PSO4.	To provide education that emphasizes topography, soil characteristics, climate, pests, local availability of inputs and the individual grower's goals.
<b>BVoc Food Processing Technology</b>	
PSO1.	To empower the students with the professional competence and expertise of food processing technology
PSO2.	To enable the students to understand food composition and its physicochemical, nutritional, microbiological and sensory aspects.
PSO3.	To familiarize the students about the processing and preservation techniques of food products
PSO4.	To emphasize the importance of food safety, food quality, food plant sanitation, food laws and regulations, food engineering and packaging in food industry
<b>BVoc Printing Technology</b>	
PSO1.	To learn the detailed aspects of various printing processes like Offset printing, Gravure printing, Flexography, Letterpress and Screen printing including the machineries being used.
PSO2.	To get the subject knowledge of printing material, pre-press technologies, digital printing, Security Printing, print finishing techniques, project work, business management, entrepreneurship development, cost estimation etc.
PSO3.	To impart basic knowledge of packaging technology to enable the students to apply the same in his professional career.
PSO4.	To get employment in various positions like Shop Floor production personnel, supervisor, production manager, works manager, maintenance personnel, coordinator in publishing and advertising agencies, sales and marketing personnel etc.

## POSTGRADUATE PROGRAMMES – MA/MSc/MCom

### **M A English**

PSO1.	To provide a deep perspective into select literary works across the globe, original or in translation.
PSO2.	To help them have mastery over the nuances of theoretical discourses, language and literature in English.
PSO3.	Enabling the students to communicate in correct and impressive language.
PSO4.	To encourage and inspire the students into creative writing.
PSO5.	Making the students fit for competing successfully in their search for career all over the world.

### **MA Malayalam**

PSO1.	To Understand new trends in Malayalam Language
PSO2.	To introduce new methodologies of Malayalam Language
PSO3.	To Inculcate research attitude and creativity

### **MA Hindi**

PSO1.	To develop students competence with reference to Hindi language and literature.
PSO2.	To give a linguistic and functional orientation to the study of Hindi language and literature.
PSO3.	To provide detailed and thorough knowledge of the trends movements and literary forms of ancient and modern Hindi literature.
PSO4.	To develop a comparative outlook towards Indian literature.
PSO5.	To familiarize the students with living forms of Hindi language.
PSO6.	To provide a comprehensive knowledge of the new literary forms.

### **MA Economics**

PSO1.	Advanced understanding of economic principles, and appreciation of different methodological approaches in economics.
PSO2.	To discuss and evaluate the application of advanced economic principles to the design of economic policy and the analysis of economic issues.
PSO3.	To apply economic analysis to everyday problems in real world situations.
PSO4.	To analyze the international as well as national level economic issues and to assess their impact on the domestic and world economy.
PSO5.	To enable the students to suggest solutions to challenging economic problems.
PSO6.	To equip the students for further study, research and teaching career in Economics.

### **M A History**

PSO1.	To help students further develop their critical thinking, independent researching and writing skills in an effort to gain knowledge and advance their carriers across a variety of disciplines.
PSO2.	To provide students with knowledge of different schools of historical writing and also to develop research interests in students.
PSO3.	To equip the students to understand gender, caste, concept of human rights, relevance of environmental studies.

PSO4.	To help the student to have a systematic understanding about accumulation of historical knowledge
PSO5.	To develop a historical sense among students about our culture and tradition.
PSO6.	To widen the scope of social sciences through interdisciplinary approach.
PSO7.	Enlarge the outlook of students about the ethnicity and racial differences of our community.
PSO8.	To inculcate a historic inquisitiveness in relation to our rich cultural past.
PSO9.	To develop the abilities to distinguish between primary and secondary sources in the collection and analysis of data.
PSO10.	To ensure the quality to distinguish and evaluate the available evidences properly.
<b>MA Political Science</b>	
PSO1.	Demonstrate knowledge and understanding of the key theories and concepts of Political Science, and insights into the theoretical advances in the discipline.
PSO2.	Demonstrate the ability to evaluate theories in the light of empirical evidence or normative propositions.
PSO3.	Apply appropriate theories to understand and analyse social and political phenomena.
PSO4.	Demonstrate an understanding of the philosophical underpinnings of political systems, processes and movements at the local, national and international levels.
PSO5.	Evince the ability to think critically about political institutions, processes and issues relating to politics at the local, national and international levels.
PSO6.	Demonstrate the intellectual ability and skills to carry out independent research.
PSO7.	Achieve and demonstrate the ability to communicate their ideas effectively using the appropriate language of the discipline.
PSO8.	Apply critical thinking, communication and analytical skills to address significant issues of concern in society.
PSO9.	Recognize issues of social justice in their local and global contexts and demonstrate knowledge and understanding of their rights and obligations as members of society.
<b>MSc Mathematics</b>	
PSO1.	To improve the perspective of students on Mathematics as per modern requirement.
PSO2.	Enhance the logical, analytical and problem solving skills of students.
PSO3.	Orient students towards relating Mathematics to applications.
PSO4.	Help the student build interest and confidence in learning the subject.
PSO5.	Encourage students for pursuing higher studies and developing Research Aptitude.
PSO6.	Acquiring continuous learning skills.
PSO7.	Motivate the students to uphold scientific integrity and objectivity in professional endeavours.
PSO8.	Paves the way to seek and understand the world around them.
<b>MSc Statistics</b>	
PSO1.	To enable to model real-world effects and their financial implications.
PSO2.	Way to get sharper predictions from the data
PSO3.	To suit for the needs of the society
PSO4.	Statistical methods to assess risk in insurance, finance and other industries.
PSO5.	Exposure to various statistical soft wares

PSO6.	To pursue higher studies in the areas of Statistics, Mathematics, Computer Science, Economics, Management and allied fields
PSO7.	Make information on economic and social development accessible to the public, allowing the impact of government policies to be assessed
PSO8.	Course prepares the students for UPSC Examinations and UGC-CSIR-NET,
<b>MSc Physics</b>	
PSO1.	Provide a complete theoretical understanding of the different areas of Physics together with the applied and current fields of research
PSO2.	Achieve a mastery, competence and analytical skills in the subject at a higher level.
PSO3.	Learn to carry out experiments in basic as well as certain advanced areas of physics
PSO4.	View Physics as a training ground for the mind developing logical reasoning that can be applied to diverse fields.
PSO5.	Gain research experience within some specific field of physics through project work.
PSO6.	Promote awareness amongst students for life-long learning and to inculcate in them professional and ethical attitude, good leadership qualities and commitment to social responsibilities.
<b>MSc Chemistry</b>	
PSO1.	To be familiarised with the emerging areas of Chemistry and their applications in various spheres of Chemical sciences and to apprise the students of its relevance in future studies
PSO2.	To be exposed to the different processes used in industries and their applications.
PSO3.	To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions.
PSO4.	To be familiarised with sophisticated spectroscopic techniques such as UV-visible, IR, NMR, EPR and Mass spectrometric methods.
PSO5.	To handle scientific instruments, to plan and perform the laboratory experiments
PSO6.	To develop research oriented skills.
PSO7.	Learn professionalism, including the ability to work in teams and apply basic ethical principles.
PSO8.	To get a clear knowledge of computational techniques, Soft wares, tools for Molecular modelling etc.
PSO9.	To attain thorough knowledge in the theory and applications of separation techniques, especially sophisticated methods like chromatography, Soxhlet techniques etc.
PSO10.	To employ critical thinking and the scientific knowledge to design, carryout, record and analyse the results of chemical reactions.
<b>MSc Botany</b>	
PSO1.	To encourage a clear, comprehensive and advanced mastery in the field of Botany.
PSO2.	To provide a deep knowledge of the basic principles of biological sciences with special reference to Botany and its applied branches.
PSO3.	To enable the students to explore the intricacies of life forms at cellular and molecular levels.
PSO4.	To sustain students' motivation and enthusiasm and to help them not only to appreciate the beauty of different life forms but also to inspire them in the dissemination of the concept of biodiversity conservation.

PSO5.	To develop problem solving skills in students and encourage them to carry out innovative research projects so as to instill in them the spirit of knowledge creation.
PSO6.	To maintain a high level of scientific excellence in botanical research with added emphasis on the role of plants in the structure and functioning of terrestrial and aquatic communities and ecosystems.
PSO7.	To equip students to perform functions that demand higher competence at national/international levels.

### **MSc Biostatistics**

PSO1.	Students will able to understand health and epidemiological issues
PSO2.	Able to identify factors affecting health problems
PSO3.	Able to study about incidence of diseases and causes
PSO4.	Able to plan, design and conduct clinical trials
PSO5.	Able to assess the efficiency of medicines
PSO6.	Able to conduct testing as well as estimation
PSO7.	Able to analyze, visualize, comprehension and interpret data
PSO8.	Able to determine sample size and clinical data management
PSO9.	Get expertise in computational Biology

### **MSc Biotechnology**

PSO1.	An education in cell biology will impart knowledge to the students to understand origins of cells and the generation of cell diversity, as well as the common features of cellular structure and function – how they obtain energy, synthesize new molecules, communicate, proliferate and survive.
PSO2.	It will also emphasis on the fundamental importance of cell biology in modern science, particularly in relation to cell technologies and health. Basic knowledge of structure and functions of major bio-molecules will be taught. Understanding of metabolic pathways (catabolism as well as anabolism), their diversity and how these are specifically regulated and interrelated in different cells
PSO3.	Students will understand the importance of microbiology which is an integrated part of Biotechnology. All the genetic manipulation of genes is carried primarily with the help of micro-organisms, hence, understanding the growth kinetics, their physiology and genetics is needed for better understanding the Molecular biology and genetic engineering.
PSO4.	Students will become familiar with the tools and techniques of genetic engineering- DNA manipulation enzymes, genome and transcriptome analysis and manipulation tools, gene expression regulation, production and characterization of recombinant proteins
PSO5.	Students will imbibe the importance of plant biotechnology regarding basic as well as advance knowledge about the in vitro culture, maintenance and preservation of plant cells, tissues and organs. The techniques of haploid, triploid and somatic hybrid plant production and their manipulation for quantitative and qualitative improved traits.
PSO6.	The main outcome of the course is to provide basic understanding of immunology and immune responses in response to various infectious and non infectious diseases. Immunology is important subject of Biotechnology, which can help us to better understand human health. This paper can also facilitate to clear NET and JRF exam as many questions are being asked on immunology.

PSO7.	The major outcome to study the environmental biotechnology is to understand the current applications of biotechnology to environmental quality evaluation, monitoring and remediation of contaminated environments.
PSO8.	An education in environmental biotechnology aid the students to identify and implement solutions to these problems and mitigation of human impact on the environment.
PSO9.	Interdisciplinary nature of the bioinformatics and biophysics course offers substantial understanding of both the biological sciences and the physical and mathematical sciences
PSO10.	Students will be able design, conduct experiments, analyze and interpret data for investigating problems in Biotechnology and allied fields.
PSO11.	Cancer biology helps us to understand how we treat and manage cancer as well as understand what raises or lowers a person's risk of developing cancer and also used to analyse effective treatment strategies for cancer.
PSO12.	Higher studies (M.Phil, Ph.D) can be pursued in order to attain research positions. Various examinations such as CSIR-NET, ARS-NET GATE, ICMR, DBT and many other opens channels for promising career in research.
<b>MSc Applied Microbiology</b>	
PSO1.	To encourage a clear, comprehensive and advanced mastery in the field of Applied Microbiology.
PSO2.	To provide the excellence of biological sciences with special reference to Microbiology and its Applicable branches
PSO3.	Enabling the students to explore the intricacies of life forms at cellular, molecular and nano level.
PSO4.	To sustain students' motivation and enthusiasm and to help them not only to appreciate the beauty of microbial life forms but also to inspire them to explore the amazing properties of microbial world in favour of human life.
PSO5.	To develop problem solving skills in students and encourage them to carry out innovative research projects thereby enkindling in them the spirit of knowledge creation.
<b>M Com</b>	
PSO1.	The programme offers an opportunity for graduates to acquire theoretical as well as practical knowledge in commerce, especially in finance and taxation.
PSO2.	This programme equips an M. Com graduate to enter into a career either in academics, research, or alternatively, in other professional areas of banking, insurance and finance such as taxation, consultancy and financial services.
PSO3.	This programme also helps the students to attain eligibility for joining doctoral research, applying for examinations like SET, UGC- NET/JRF, KPSC, UPSC and other recruitment board examinations for which postgraduation is the basic qualification and joining professional courses in Teaching.
PSO4.	Students will acquire updated knowledge on research methods, techniques and the process and to develop skills in the application of research methods for business problem solving.
PSO5.	To build a strong inclination towards lifelong learning and acquiring contemporary knowledge in different areas of Commerce and Business Studies.

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