

# SIR SYED COLLEGE, TALIPARAMBA

## PROGRAMME OUT COMES

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### B.Sc. Courses

#### Statistics

- To cultivate statistical thinking among students by acquainting them with various statistical methods and its applications.
- Be able to construct statistical models of real world problems and obtain their solutions.
- To acquire a good knowledge in decision making and inferences.
- To familiarize with statistical software packages and can serve as a data analyst in the public or private sector.

#### Zoology

- Skill development for the proper identification, naming and classification of life forms especially animals.
- Acquisition of knowledge on structure, life cycle and life processes that exist among animal diversity through certain model organism studies.
- Understanding of various interactions that exist among plants animals and microbes; to develop the curiosity and love on the dynamicity of nature.
- Understanding of the major elements of variation that exist in the living world through comparative morphological and anatomical study.
- Ability to explain the diversity and evolution based on the empirical evidences in Morphology, Anatomy, Embryology, Physiology, Biochemistry, Molecular Biology and Life history.
- Skill development in the observation and study of nature, biological techniques and scientific investigation
- Making aware of the scientific and technological advancements in the fields of Information and Communication, Biotechnology and Molecular Biology for further learning and research.
- Internalisation of the concept of conservation and evolution through the channel of spirit of inquiry

#### Botany

- Skill development for the proper description using botanical terms, identification, naming and classification of life forms especially plants and microbes.
- Acquisition of knowledge on structure, life cycle and life processes that exist among plant and microbial diversity through certain model organism studies.
- Understanding of various interactions that exist among plants, animal and microbes; to develop the curiosity on the dynamicity of nature.
- Understanding of the major elements of variation that exist in the living world through comparative morphological and anatomical study.
- Ability to explain the diversity and evolution based on the empirical evidences in morphology, anatomy, embryology, physiology, biochemistry, molecular biology and life history.
- Skill development for the collection, preservation and recording of information after observation and analysis- from simple illustration to molecular database development.

- Making aware of the scientific and technological advancements- Information and Communication, Biotechnology and Molecular Biology for further learning and research. PSO8: Internalisation of the concept of conservation and evolution through the channel of spirit of inquiry

### **Forestry**

- Develop the skills of art and science of forest management
- Generate the spirit and understand the measures of conservation of forests, biodiversity and natural resources
- Develop the skills for cultivation of forest trees, afforestation and ecological restoration
- Understand and develop the techniques of harvesting and utilization of forest resources in a sustainable manner
- Create knowledgebase regarding the legislative measures for protection of forests and wildlife and to safeguard tribal interests
- Develop skill for improvement and conservation of forest genetic resources
- Develop positive and sustainable vision in utilizing forests to beat the threats including global climate change

### **Physics**

- Understand and apply the principles of Classical mechanics, Quantum mechanics, Thermodynamics, Nuclear physics and Electrodynamics
- Understand and apply the principles of Solid state physics, Optics, Photonics and Spectroscopy
- Understand the principles of Electronics, Design and test electronic circuits
- Understand and apply the principles of Mathematical Physics and Computational Physics and do Error analysis in measurement.

### **Chemistry**

- Understand the fundamental concepts, principles and processes underlying the academic field of chemistry, its different subfields (analytical, inorganic, organic and physical), and its linkages with related disciplinary areas/subjects
- Demonstrate procedural knowledge that creates different types of professionals in the field of chemistry and related fields such as pharmaceuticals, chemical industry, teaching, research, environmental monitoring, product quality, consumer goods industry, food products, cosmetics industry, etc.
- Employ critical thinking and the scientific method to design, carry out, record and analyze the results of chemical experiments and get an awareness of the impact of chemistry on the environment and the society.
- Use chemical techniques relevant to academia and industry, generic skills and global competencies, including knowledge and skills that enable students to undertake further studies in the field of chemistry or a related field, and work in the chemical and non-chemical industry sectors.
- Undertake hands on lab work and practical activities which develop problem solving abilities required for successful career in pharmaceuticals, chemical industry, teaching, research, environmental monitoring, product quality, consumer goods industry, food products, cosmetics industry, etc.

- Understand safety of chemicals, transfer and measurement of chemical, preparation of solutions, and find out the green route for chemical reaction for sustainable development.
- Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community.

### **Mathematics**

- Understand the basic concepts and tools of Mathematical logic, Set theory, Number theory, Geometry, Calculus, Algebra, Abstract structures, Linear Algebra, Analysis, Laplace transforms, Fourier series, Graph theory, and Optimization and methods of proofs.
- Model real world problems into Mathematical problems and find solutions and understand the application of Mathematics in other Sciences and Engineering.

### **B.A. COURSES**

#### **Malayalam**

- To identify poetry as a form of language that expresses life situations, complexities and also to experience Introduce the literary form of poetry to develop the ability to enjoy poetry.
- To create awareness about the poets and poetic models who played a crucial role in the growth and development of Malayalam poetry.
- To get acquainted with present-day techniques that came from Malayalam Poetry.
- To identify the socio-cultural contexts that make poetry possible through the use of language features and train them to re-evaluate and critique their politics.

#### **Economics**

- The programme with structured curricula will support the academic development of the undergraduates.
- The programme will provide the students with the opportunity to pursue courses that emphasize quantitative, qualitative and theoretical aspects of economics.
- The programme will provide a well resourced teaching learning environment for the students of economics, which will definitely lead to the ultimate educational goal of “learning to be”.
- The programme will promote academic writing, critical thinking and research aptitude among the students.
- Needless to point out, the students will gain a source of livelihood by expanding their skill set and widening their knowledge horizon.

#### **History**

- Understand factual and conceptual aspects of historical changes in multiple areas of the world
- Think contextually and critically about the past to understand human experiences
- Analyze why and how historical events take place based on the verification of diverse evidences and arguments
- Design and write research papers based on primary and secondary sources

- Make logical oral presentation of factual and theoretical knowledge of historical events and changes
- Develop rational, humanitarian, democratic and secular outlook based on historical knowledge and contemporary societal, economic and political issues

### **Functional English**

- Demonstrate a thorough command of English language and its linguistic structures.
- Communicate through speech and writing in a variety of contexts and genres
- Produce and edit oral and written English communication and translate English into Malayalam /Hindi and vice-versa
- Recognize and appreciate the importance of major literary genres, sub-genres and periods.
- Analyze discourse for artistic merit, practical effect, philosophical standard and underlying structure
- Recognize and comprehend different varieties of English.
- Exchange ideas with faculty and students in classrooms and on the campus.

### **Arabic**

- Understand the scope and importance of Arabic grammar
- Understand the different types of sentences.
- Understand the differences between spoken and written Arabic
- Understand the Prewriting strategies to plan writing
- understand the usage of greeting words in different occasions
- understand the common phrases in Arabic
- Identify the commanding words in Arabic
- Design advertisements and biodata in Arabic
- Understand the Arabic grammatical concepts through practical lessons
- Develop the skill to use the proper written language
- Understand the basic principles and components of Arabic linguistics
- Understand the advanced form of Arabic structure
- Understand the Socio-Cultural Conditions of the Arabs from Primitive Age to Modern Time
- Understand the importance of Arabic Language as a Classical Language among the Languages in the world
- Learn the survival of Arabic Language from the decay of the time throughout the centuries
- Understand how a language becomes the life of a human being
- Learn the contribution of Arabic Language to the World Literature

### **Commerce Stream**

#### **B.Com.**

- After the successful completion of the B.Com Degree Programme, the students shall be able to;

- Understand the concepts and techniques of commerce and its application in business environment
- Conceive the ideas on entrepreneurship and develop the skills for setting up and management of business organizations
- Develop the skills and abilities to become competent and competitive in the business world
- Develop the competency to take wise decisions at personal and professional level. Appraise the impact of other disciplines on the working of business



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