



Telangana Social Welfare Residential Degree College For Women, Nirmal

Dist: Nirmal 504106

Mobile: +91-7995660879

E-Mail: prl-rdcw-nrml-swrs@telangana.gov.in

Sri E. Venkateshwarlu
MA, B.Ed, M. Phil.
Principal



Department Of Microbiology



Telangana Social Welfare Residential Degree College For Women, Nirmal 504106

Department of Microbiology

Programme outcomes

PO1: Understanding of Basic Concepts: Students gain a solid understanding of fundamental concepts in microbiology, including topics such as bacteriology, virology, microbial physiology, genetics, and molecular biology.

PO2: Laboratory Skills: Students develop practical skills in handling microbes, conducting laboratory experiments, and using scientific instruments.

PO3: Application of Good Practices: Students learn about good laboratory practices and good manufacturing practices related to microbial quality control.

PO4: Problem Solving: Students acquire subject knowledge to address real-world issues such as bioremediation, waste management, and diagnostics.

PO5: Interdisciplinary Awareness: Students recognize the interdisciplinary nature of microbiology and its connections to other fields like biochemistry, biotechnology, and biotechnology.

PO6: Communication Skills: Students enhance their communication skills, including reading, listening, and speaking, which are essential for expressing their ideas clearly and effectively.

B.Sc Microbiology Programme Outcomes

Semester I: Introduction to Microbiology

- Students will identify and apply fundamental concepts and methods in microbiology.
- Students will study the growth and control of microbes, as well as bacteriological techniques involved in microbiology.
- They will apply appropriate microbiology laboratory techniques, instruments, and equipment following highest safety protocols.

Semester II: Microbial Physiology and Biochemistry

- Students will gain knowledge about microorganisms' structure and functions, biotechnology principles, and their applications in food and medicine.
- They will study knowledge to understand microbial physiology and identify microorganisms.
- To understand the central metabolism, energy conservation, macromolecular biosynthesis, and metabolic control integration.

Semester III: Molecular Biology and Microbial Genetics

- Students will learn the principles and concepts of prokaryotic and eukaryotic genetics, as well as viral genetics, and their applications in research.
- They will understand mutagenesis, mutations, and recombination, and recognize their significance in microbial evolution.
- They will gain the knowledge about Central Dogma of the life.

Semester IV: Microbial Immunology and Biotechnology

- Students will gain knowledge about the immune system's humoral and cellular immunity and identify disease-causing microorganisms.
- The program integrates laboratory skills and knowledge needed to assess the immune system's humoral and cellular immunity and identify disease-causing microorganisms.

Semester V: Environmental Microbiology

- Students will gain the knowledge about important microorganisms associated with food and their characteristics.
- They will learn various techniques for enumeration and control of microorganisms in food.
- They will gain the essential knowledge and apply techniques for preserving food.
- They will understand the role of different microorganisms in food spoilage, food fermentation, and foodborne diseases.

Semester VI: Environmental Microbiology

- Students will understand the microorganisms in air and water and their impact on human health and environment.
- They will gain knowledge about the control of air and water borne microorganisms and diseases.

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FOR WOMEN: NIRMAL.

Department Of Zoology



DEPARTMENT OF ZOOLOGY

FOCUS AREAS


- 1. **Cell Biology:** Study of the structure and function of cells, including the cell cycle, cell division, and the role of organelles.
- 2. **Genetics:** Study of the inheritance of traits, including Mendelian genetics, population genetics, and molecular genetics.
- 3. **Evolution:** Study of the processes that lead to the diversification of life forms, including natural selection, speciation, and phylogenetics.
- 4. **Systematics:** Study of the classification of organisms, including taxonomy and phylogenetics.
- 5. **Physiology:** Study of the functions of the body, including metabolism, respiration, and circulation.
- 6. **Ecology:** Study of the interactions between organisms and their environment, including population dynamics and community ecology.

Department of Zoology

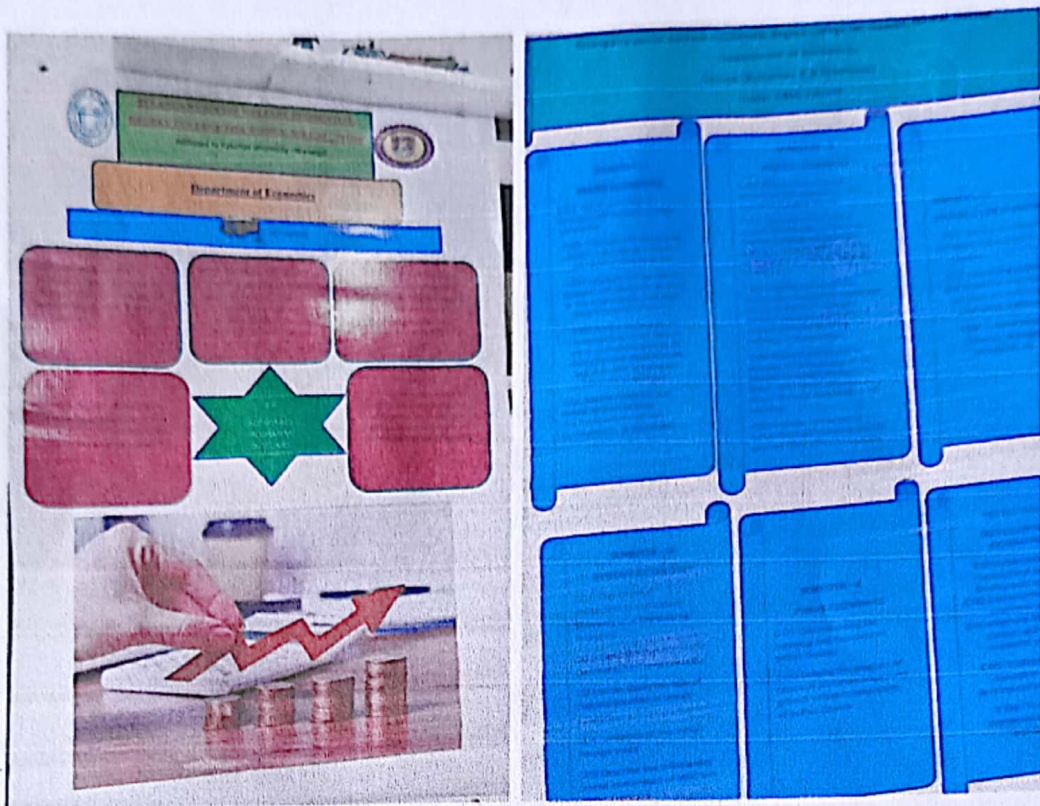
DEPARTMENT OF ZOOLOGY

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Department Of Economics



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DEPARTMENT OF POLITICAL SCIENCE
PROGRAMME & COURSE OUTCOMES OF BA

Political Science

PROGRAMME OUTCOMES

- PO1 BUILDING OVERALL CONSCIOUSNESS REGARDING NATIONAL POLITICAL HISTORY, INTERNATIONAL RELATIONS AND PRESENT INDIAN AND WESTERN POLITICAL THINKERS.
- PO2 UNDERSTANDING THE NATURE AND DEVELOPMENTS IN NATIONAL AND INTERNATIONAL POLITICS .
- PO3 ANALYSING THE INDIAN CONSTITUTIONAL PROVISIONS, MAJOR LEGISLATIONS AND REFORMS
- PO4 USE OF CASE STUDY METHOD FOR ANALYSING THE WORKING OF IMPORTANT INTERNATIONAL AND REGIONAL ORGANISATIONS LIKE UN, EU, ASEAN ETC.
- PO5 DEVELOPING KNOWLEDGE OF ADMINISTRATIVE STUDIES WITH SPECIAL REFERENCE TO INDIAN ADMINISTRATIVE STRUCTURES AND PRACTICES
- PO6 EXAMINING INDIA'S FOREIGN RELATIONS WITH HER NEIGHBOURS AND GREAT POWERS

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Telangana Social Welfare Residential Degree College (For Women),
Nirmal, Dist : Nirmal 504106.

DEPARTMENT OF MATHEMATICS

PROGRAMME & COURSE OUTCOMES OF B. SC. MATHEMATICS UNDER CBCS
M.P.C (Mathematics, Physics, Chemistry) & M.S.Cs (Mathematics, Statistics, Computer Science)

PROGRAMME OUTCOMES

Upon completing the B. Sc. degree in the field of Mathematics, students have capability of

- PO1: A solid understanding of graduate level Differential and Integral Calculus, Differential Equations, Algebra, Real Analysis, Linear Algebra and Numerical Analysis.
- PO2: Using their mathematical knowledge to analyse certain problems in day to day life.
- PO3: Identifying unsolved yet relevant problems in a specific field.
- PO4: Undertaking original research as a particular topic.
- PO5: Communicate mathematics accurately and effectively in both written and oral form.



COURSE OUTCOMES FOR MATHEMATICS

SEMESTER I DIFFERENTIAL AND INTEGRAL CALCULUS

Course Outcomes: Upon the successful completion of the course students will:

- CO1: Interpret equations and graphs of the basic class of functions.
- CO2: Interpret the mean value theorem.
- CO3: Analyse inverse functions.
- CO4: Examine exponential, logarithmic, and hyperbolic functions.
- CO5: Interpret the mean value theorem.
- CO6: Calculate the areas of curved regions by using integration methods.
- CO7: Find the volume of a solid of revolution using various methods.
- CO8: Apply the differentiation rules to determine a derivative.

SEMESTER II DIFFERENTIAL EQUATIONS

Course Outcomes: Upon the successful completion of the course students will:

- CO1: Classify the differential equations with respect to their order and linearity.
- CO2: Solve exact differential equations.
- CO3: Convert separable and homogeneous equations to exact differential equations by integrating factors.
- CO4: Solve Bernoulli and Riccati differential equations.
- CO5: Will be able to find solution of higher order linear differential equations.
- CO6: Will be able to solve systems of linear differential equations.
- CO7: Will be able to use the Laplace transform in finding the solution of linear differential equations.

SEMESTER III REAL ANALYSIS

Course Outcomes: Upon the successful completion of the course students will:

- CO1: Be able to demonstrate competence with the algebraic and order properties of real numbers.
- CO2: Able to demonstrate competence with properties of real numbers by finding supremum and infimum of sets and using the completeness property of real numbers.
- CO3: Able to demonstrate competence with elementary properties of sequences by finding limits and proving results involving sum/difference/product/quotients of sequences.
- CO4: Able to apply the monotone convergence theorem to prove convergence of bounded monotone sequences.

SEMESTER IV ALGEBRA

Course Outcomes: Upon the successful completion of the course students will:

- CO1: Polar representation of complex numbers, nth roots of unity, De Moivre's theorem for rational indices and its applications.
- CO2: Well ordering property of positive integers, division algorithm, divisibility and Euclidean algorithm, Congruence relation between integers.
- CO3: Equivalence relations and partitions, functions, composition of functions, Invertible functions, one to one correspondence and cardinality of a set.
- CO4: Permutations, cycle notation for permutations, even and odd permutations.
- CO5: Definition and elementary properties of groups, Symmetries of a square, dihedral groups, quaternion groups (through matrices).

SEMESTER V LINEAR ALGEBRA

Course Outcomes: Upon the successful completion of the course students will:

- CO1: Be able to gain proficiency in solving systems of linear equations using matrices and demonstrate a working knowledge of algebraic properties of matrices.
- CO2: Be able to understand Euclidean Vector spaces, their inherent and algebraic structure and the accompanying geometry.
- CO3: Be able to prove Cayley-Hamilton theorem, Schwartz inequality, Gram-Schmidt orthogonalization process.
- CO4: Be able to define Linear Transformations and find the domain, range, kernel, rank, and nullity of a linear transformation.
- CO5: Be able to apply vectors, inner products, and linear transformations to real world situations.

SEMESTER VI NUMERICAL ANALYSIS

Course Outcomes: Upon the successful completion of the course students will:

- CO1: Some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, up to a certain given level of precision.
- CO2: Interpolation techniques to compute the values for a tabulated function at points not in the table.
- CO3: Applications of numerical differentiation and integration to convert differential equations into difference equations for numerical solutions.
- CO4: Learn various methods of numerical differentiation and integration.
- CO5: Choose appropriate numerical methods and determine the solutions to ordinary differential equations.

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DEPARTMENT OF ENGLISH
ENGLISH A COURSE FOR THE STUDENTS OF B.A. POLITICAL SCIENCE

LEARNING OBJECTIVES

1. To enable the students to understand the meaning and importance of the English language and to use it effectively in their studies and in their daily life.

2. To enable the students to understand the structure and content of the English language and to use it effectively in their studies and in their daily life.

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THE COURSE CONTENTS

<p>Unit I</p> <p>1.1. The study of English Language and its importance</p> <p>1.2. The study of English Language and its importance</p> <p>1.3. The study of English Language and its importance</p> <p>1.4. The study of English Language and its importance</p>	<p>Unit II</p> <p>2.1. The study of English Language and its importance</p> <p>2.2. The study of English Language and its importance</p> <p>2.3. The study of English Language and its importance</p> <p>2.4. The study of English Language and its importance</p>	<p>Unit III</p> <p>3.1. The study of English Language and its importance</p> <p>3.2. The study of English Language and its importance</p> <p>3.3. The study of English Language and its importance</p> <p>3.4. The study of English Language and its importance</p>	<p>Unit IV</p> <p>4.1. The study of English Language and its importance</p> <p>4.2. The study of English Language and its importance</p> <p>4.3. The study of English Language and its importance</p> <p>4.4. The study of English Language and its importance</p>
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Library



Telangana Social Welfare Residential Degree
College For Women, Nirmal 504106

Department of Commerce

Programme outcomes

PO1: Employment opportunities:
B.Com(C&G) students will gain minimum employment for their livelihood in the areas of commercial services, financial markets, manufacturing, construction and service companies.

PO2: Critical Thinking:
Develops the ability to completely evaluate new ideas, research findings in evaluation to business and commerce related issues.

PO3: Managerial Skills:
Ability to complete knowledge into performance makes business decision through capability to interact, motivate and understand the concepts, develops the ideas and implement the strategies



PO4: Entrepreneur skills:
This course prepares an individual graduate to start a business of her own in the capacity of an entrepreneur.

PO5: Business skills: This course is designed to provide students with a wide range of Business skills and understanding in streams like Auditing, Finance, Business Statistics, Accounting, Taxation and Management.

PO6: Communication Skills:
Students enhance their communication skills, including reading, listening, and speaking, which are essential for expressing ideas clearly and effectively.

COMMERCE

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