

Course Outcomes

SEMESTER I

Course Code: **ENG-151**

Title of the Course: **Communicative English: Spoken And Written**

Number of Credits: Theory - 2

Course outcomes

1. Elicit and show respect for the views of others as well as be culturally sensitive.
2. Display emotional stability and self-confidence.
3. Apply critical thinking skills through decision-making and problem-solving.
4. Demonstrate effective written communication for an intended purpose and audience that follows genre/disciplinary conventions that reflect creation, organisation, precision and revision.

SEMESTER I

Course Code: **VAC-104**

Title of the Course: **Constitutional Values and Obligations**

Number of Credits: Theory - 2

Course outcomes

1. Understand the world, country, society and have awareness of ethical problems, social rights, values and responsibility to the self and to others.
2. Understand and follow changes in patterns of political behaviour, ideas and structures.
3. It will develop skills such as confidence in negotiation, public speaking, and a good understanding of political system.
4. It will fosters critical thinking skills. It encourages students to question assumptions, evaluate evidence, and think logically about complex issues. These skills are valuable in a variety of careers, from law and journalism to business and public service.

SEMESTER I

Course Code: **CHC 100**

Title of the Course: **Fundamentals of Chemistry**

Number of Credits: Theory - 3, Practical - 1

Course outcomes (Theory)

1. Identify the properties of liquids and gases.
2. Explain the applications of liquid and gas.
3. Elucidate the atomic structure based on Quantum Theory.
4. Identify the use of curved arrow notations inorganic reaction mechanisms.
5. Understand various methods of preparation and reactions of alkanes, alkenes and alkynes.

Course outcomes (Practical)

1. To acquire the knowledge and skill of basic volumetric and gravimetric estimations.
2. The students will be able to get hands-on experience on the purification techniques for organic compounds.
3. The students will be able to get hands on experience on the identification of chemical nature of organic compounds.

SEMESTER I

Course Code: **MIC-100**

Title of the Course: **Basics of Microbiology**

Number of Credits: Theory - 3, Practical - 1

Course outcomes

1. Understand different types of microorganisms and apply the knowledge of different classification systems for grouping microorganism.
2. Explain the cellular organisation of prokaryotic and eukaryotic cells.
3. Apply the techniques for obtaining and preserving pure cultures of bacteria.
4. Elaborate on physical and chemical methods of microbial control

SEMESTER I

Course Code: **MIC-141**

Title of the Course: **Techniques in Microbiology - Staining and Microscopy**

Number of Credits: Theory - 1, Practical - 2

Course outcomes

1. Perform staining and microscopy.
2. Operate different types of microscopes.
3. Observe various types of cells and cellular structures using different microscopes.
4. Analyse and interpret results of a range of staining techniques

SEMESTER III

Course Code: **MIC-200**

Title of the Course: **Microbial Biochemistry**

Number of Credits: Theory - 3, Practical - 1

Course outcomes

1. Identified structures of carbohydrates, proteins and lipids and explain their biological importance.
2. Explained structure and function of enzymes with reference to lock- and-key and induce-fit models.

3. Analyzed the factors affecting enzyme activity and apply the kinetics of enzymes such as Michaelis-Menten and LB plot.
4. Applied the techniques involved in biochemical methods for isolation and analysis of biomolecules

SEMESTER III

Course Code: **MIC-201**

Title of the Course: **Molecular Biology**

Number of Credits: Theory - 3, Practical - 1

Course outcomes

1. Understood the structure of nucleic acids and the processes of replication, transcription, and translation in prokaryotes and eukaryotes.
2. Explained the role of DNA, RNA, and proteins in life processes in microorganisms at molecular level.
3. Applied the techniques of molecular biology in replication, transcription, and translation in bacteria.
4. Designed the experiments to demonstrate effect of biomolecules on molecular processes in bacteria.

SEMESTER I

Course Code: **MAT-141**

Title of the Course: **Numerical Analysis using Python/SageMath**

Number of Credits: Theory - 1, Practical - 2

Course outcomes

1. Find the roots of algebraic and transcendental equations.
2. Apply Interpolation to solve real life problems.
3. Make use of the techniques of numerical differentiation and integration.
4. Determine the best line/quadratic curve/exponential curve to fit the given data. CO5. Utilize Python/SageMath software to aid mathematical pursuits.