



DEVI AHILYA VISHWAVIDYALAYA, INDORE

School of Life Sciences

1.1.1

Program outcome and course outcome



PROGRAMME SPECIFIC OUTCOMES

Programme Specific outcomes MSc Life Sciences course

1. Students will be able to understand identify and analyse problems related to Life Sciences and find conclusions with basic knowledge in the field of Life Sciences.
2. Students will be able to design experiments, perform experiments, analyse data and interpret it and will be able to draw conclusions from it in the relevant field of Life Sciences.
3. Students have knowledge and will be able to decide and apply appropriate tools and techniques currently used in Life Sciences.
4. Students will be able to justify health safety ethical and IPR issues in Life Science research.
5. Students will be able to understand the need and impact of biochemical solutions on environmental and societal context keeping in view need for sustainable solutions.

Programme specific outcomes of Industrial Microbiology

1. Students will gain knowledge of use of microbes in applied fields and solve problems related to the fields of Microbiology.
 2. The objectives of masters programme in Industrial Microbiology is to equip the students to apply knowledge of molecular mechanism of cellular processes in microbes to applied aspects.
 3. The laboratory training in addition to theory is included and prepare students for careers in applied research where microbes are increasingly applied.
 4. Basic and current updates in the area of fermentation technology.
- Industrial microbiology, Agriculture and Environmental Microbiology are provided

to students and they are initiated and motivated to pursue research in these applied areas.

6. The masters in Industrial Microbiology programme address the increasing need for skilled scientific manpower with an understanding of research and contribute to application, advancement and impartment of knowledge in the field of Industrial Microbiology.

Programme specific outcomes M.Phil Life Sciences

1. The M. Phil. in Life Sciences is a full time one and half year programme. The course trains students with a solid foundation of analytical and laboratory skills further preparing them for a wide range of carrier options including doctoral studies and industrial research.

2. The programme will make students capable to design and carry out experiments safely and to interpret experimental data, production of substantial original research of significance and quality for presentation as a thesis and ability to present their work through written oral, and visual presentation and able to draft a original research proposal.

Programme specific outcomes of Ph.D Life Sciences

1. This programme is to encourage professional development in the chosen area of Life Sciences through in depth knowledge, hands on training and preparing students for advance research.

Ph.D in the Life Sciences programme starts with a course work which includes papers in Research Methodology ,Computer skills, literature Survey and reviews and synopsis writing.

2. The course gives deep study of methods generally involved in various fields of Life Sciences research like Protein Biochemistry, Immunology, Plant Physiology, Environmental Biology, Plant tissue culture, Microbiology etc. being carried out at School of Life Sciences.

3. On completion of this programme students are trained in basic computer skills to be able to use computers for their research literature search data interpretation ,thesis typing and presentation and publication of scientific data on successful completion of course work. Students are the registered on a topic of their choice and available facilities to carry out research work which on completion is submitted as a thesis . The major objectives of the programme is to motivate students to choose a carrier in life science and its application to relevant fields.

Course outcomes of Life Sciences and Industrial Microbiology

Biochemistry

To acquire basic concepts of biological macromolecules , their role in cells and ultimately in an organisms.

Analytical Techniques

To acquire knowledge of tools and technique used for detection and measurement of biological molecules and their functions.

Cell Biology

This course gives detailed understanding of the generation ,survival and death of a cell.

Basic Genetics

This course imparts knowledge in inheritance, heredity, genetics defects and abnormalities.

Biostatistics, Bioinformatics, Computer

This course equip students on analysis of scientific data and concept of significance , use of computers in storing and analyzing data and use various biological databases.

Basic Microbiology

This course provides introduction to the world of bacteria ,virus and fungi.

Immunology

This course provides insight into defence system of human body and natural mechanism of protection from disease.

Molecular Biology & Genetic Engineering

This course provide detailed understanding of DNA replication, transcription , translation and manipulation and its use in modern biology.

Environmental Biology

This course imparts knowledge on environmental challenges faced by mankind and their solution.

Animal Physiology

This course deals with all the physiological process in animal system.

Plant Metabolism

This course address the metabolic pathways specific to plant systems.

Bioprocess technology and down stream processing

This course provide industrial application of Microbiology and give training on taking lab scale process to industry scale.

Virology

This course provides structure and properties of viruses and diseases caused by them.

Medical Microbiology

This course provides role of microbes in disease processess and their control and

prevention.

Food Microbiology

This course provide use of microbes in fermented foods and long terms preservation of