DEVI AHILYA VISHWAVIDYALAYA, INDORE

School of Biochemistry

1.1.1
Program outcome and course outcome

School of Biochemistry

PO

Biochemistry is mainly a research field and after postgraduation, the students have opportunity to join Ph.D. programme. The students may find opportunities in pharmaceutical and food industries, bioinformatics, medical fields etc. The students are encouraged to join national level research institutes for their project work so as to continue in the same field after course completion. The school provides all possible help to the students including to train them in subject and to facilitate their progression. This is being reflected by selection in national and international qualifying examinations, NET, GATE, SLET, GRE/TOEFEL/GMAT etc.

PSO

The M.Sc. Biochemistry programme is broad based for its applicability to other disciplines, which require biochemistry background. The coverage of all the major areas of biochemistry which includes basic, allied and advanced coursesbenefits the learner to achieve their goal in different fields, in particular Medical, Agricultural, Pharmaceutical, Biological, Food Analysis etc.The detailed coverage of various topics helps the students to qualify national level examinations.

CO

Knowledge of the basic core courses, like Chemistry of biomolecules, Cell biology, Analytical biochemistry, Metabolism etc develops concepts of biochemistry and trains the learner to work in the research laboratories and research and development sections of industries. The generic courses, like Genetics, Microbial biochemistry, Nutritional biochemistry, Physiology, Clinical biochemistry etc provide the knowledge of biochemistry related disciplines such as, industrial and medicinal fields. The other core courses Enzymology, Immunology, Molecular Biology, Biotechnology covered in the curriculum have applicability in almost all the research laboratories and industries.

CSO

Basic courses covered in Biochemistry field are

BC5A 1.1, Analytical Biochemistry (Core course)

Analytical Biochemistry study covering biochemical techniques is essential for developing technology skills and trains the learner to work in the research laboratories and research and development sections of industries. The course is of importance for employability in the fields of R&D units.

BC5A 1.2, Chemistry of Biomolecules

Chemistry of biomolecules study involving details of major chemical constuents of the cell assist in developing knowledge of their role in biochemistry.

BC5A 1.3, Cell Biology

Cell biology knowledge concerning structure and functions of different types of cells and also cell organelles is useful for understanding the various physiological processes.

BC5A 2.3 and 2.4, Metabolism

The course of Metabolism conceptulise the individual biochemical reactions and their mechanisms

The Generic courses of the curriculum requiring biochemistry knowledge are

BC5A 1.4, Microbial Biochemistry

Microbial biochemistry study trains the learner for joining the industrial fields, like Food and Fermentation industry etc. This course of the curriculum gives an opportunity to students in finding jobs in industries.

BC5A 1.5, Genetics & Microbial Genetics

The course of **Genetics** forms the basis for understanding the processes of genetic transmission and mutation leading to diversity of the organisms. This has applicability in breeding for developing strain with desirable qualities and also in understanding genetic disorders.

BC5A 2.5, Nutritional Biochemistry

Learning Nutritional biochemistry course adds knowledge for food qualities, calorie maintainance, planning for balanced diet etc and has applicability in Food and Nutrition fields. Job opportunities for this course include joining with nutritionist, dietician etc.

BC5A 2.6, General Physiology

Physiology study helps in gaining knowledge related to major functional processes of human being and is of importance in medicinal field.

BC5A 3.4, Clinical Biochemistry

Clinical biochemistry study develops knowledge concerning pathological states and diseases, hence has applicability in medicinal field.The course helps the learner to find opportunities in pathological laboratories

BC5A 3.5 and 3.6, Biostatistics and Computer Applications

Interdisciplinary Courses, like Bistatistics and Computer Applications, train the learner for software applicability and statistical analysis during research.

Advanced courses included in the programme are

BC5A 2.1, Enzymology

Enzymology covers various types of studies for enzymes being important for use in almost all the biochemical research and drug designing.

BC5A 2.2, Immunology

Immunology course of the curriculum has applicability in research for immunotechniquesand for aspects of immunity development.

BC5A 3.2, Molecular Biology

Molecular Biology studies are being extremely important for use in almost all the biochemical research and provides the molecular basis of various biological processes.

BC5A 3.3, Biotechnology

Biotechnology course is of significance for use in almost all the molecular biological research and various industries.

BC5A 4.1, Research Project Work

Project Work as part of curriculum, the students are required to complete dissertation work during Sem IV of the Programme. As they join research institutes/industries for their project work, they get an opportunity to continue in the same field after course completion.