St. Bede's College, Shimla

PROGRAMME OUTCOMES

BACHELOR OF SCIENCE (B.Sc.) BIOTECHNOLOGY (HONOURS)

[PO-1] AKIN TO ACADEMIA AND INDUSTRY REQUIREMENT: Students will be able to demonstrate and apply their knowledge of cell biology, biochemistry, microbiology and molecular biology to solve the problems related to the field of biotechnology. They will have a comprehensive understanding of fundamental molecular principles of genetics, the relationship between phenotype and genotype in human genetic traits, the basics of genetic mapping, and the regulation of gene expression. The curriculum including advanced subjects like Bioinformatics ensure broad exposure to various aspects of biotechnology providing students with a well rounded education.

[PO-2] FOSTERING GLOBAL COMPETENCY AMONG STUDENTS: Biotechnology enhances career opportunities in industry, clinical settings both locally and globally or as a preparation for further higher education through in–house state of the art laboratory exposures and outbound dissertation activities fostering Global Competencies among Students.

[PO-3] CONTRIBUTING TOWARDS THE DEVELOPMENT OF THE SOCIETY: Entwined with culture and socio-ethical values, biotechnology contributes to solving problems like food and water insecurity that impede national development and threaten peace in the developing world. This field potentially enriches the global thinktanks with right mixes of innovative ability, existing policies at generating and safeguarding the product of their intellect, equipped with entrepreneurship abilities thereby contributing to self and national development.

[PO-4]ENHANCING LABORATORY SKILLS: Biotechnology education comes alive through hands-on experiences in well-equipped labs. The field demonstrates proficiency in basic laboratory skills common to clinical and nonclinical research laboratories, including aseptic technique, making accurate and precise measurements using balances and macroand micro-pipetting, using a microscope, preparing solutions, operating current instrumentation, preparing samples for various analyses, and maintaining a proper scientific laboratory notebook. It exhibits growth in academic performance and personal and professional responsibility as well as an ability to work independently and collaboratively.

[PO-5] LIFE-LONG LEARNING, VALUE EDUCATIONAND ETHICS: With the pursuit of knowledge for either personal or professional reasons, learners are also encouraged to volunteer and be self-motivated



that not only enhances society values, active participation and personality development, but also enhances self-sustainability and employability.

[PO-6] PROBLEM ANALYSES AND SOLUTION: Well equipped with an understanding of the analytical methods involved, they are in a position to interpret and analyze results so obtained from experiments and draw suitable conclusions against their supported data acquired. At the end of the program, students will be able to identify, formulate and analyze scientific problems and reach concrete solutions using various principles of mathematics and sciences.