St. Bede's College, Shimla

PROGRAM OUTCOMES

BSC PROGRAMME

St. Bede's College offers three-year Bachelor of Science programmes. In these three years, students are providing with the opportunity to gain knowledge and skills in a range of subjects e.g. Physics, Chemistry, Mathematics, Zoology, Botany, and Computer Science. Depending upon the subject at +2 class, students can choose any of the combinations of these subjects: **(1)** Botany, Zoology, and Chemistry **(2)** Chemistry, Physics, and Mathematics **(3)** Physics, Mathematics and Computer science. These combinations are designed to give students hands-on experience with different laboratory methods, so they can learn how to use state-of-the-art equipment, think critically, and be independent and part of a team. Even though the long-term goals of the students vary, these courses can help them get into careers that require scientific and technical knowledge, as well as logical reasoning skills. Here's a list of the key outcomes of the programme, which highlight the areas in which students are expected to become proficient by the end of your undergraduate program.

(1) PO-1: Knowledge: Students are encouraged to apply the knowledge of mathematics and science fundamentals to various solutions of complex problems. As such, knowledge of the subject is the sole objective of any student learner. A student is exposed to a wide range of topics in various subjects and is given intensive training in each of the courses that have laboratory related work. The learner is encouraged to use various mathematical methods (analytical and numerical) and experimental methods as an application to the acquired concepts and principles that help in studying various branches of sciences. At the end of the program, students are able to gain thorough knowledge in key areas in the subjects offered.

(2) PO-2: 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.

(3) PO-3: Future Endeavours: During the various courses in classes, students were getting aware about the future about that particular subject. With our learners long-term professional pursuits being quite varied, many are drawn to careers that require scientific skills or technical expertise or strong quantitative reasoning abilities. Keeping this in mind, the institution apprises students of various employment opportunities that are available in areas of their choice through the placement cell. To equip these learners with knowledge other than that of the subject such as skills required helping them qualify for jobs, all the science subjects offer skill enhancement courses so that learners have a better edge over their counterparts. As such, at the end of the programme students will be able to pursue their carrier through subject knowledge and additional skills.

(4) PO-4: Environment sustainability and Society: 'Environmental sustainability' has become the slogan of the 21st century. Through class room discussions and research projects,

this programme facilitates active dialogues with factors which influence human-ecology interactions. As such, at the end of this programme students will be able to identify and analyze socio-political, cultural and economic problems which act as deterrents to environmental sustainability and provide creative solutions towards the same. As an outcome of PO-1, PO-2 and PO-3, learners are encouraged to apply logical reasoning based on the knowledge, skills, designing solutions to assess societal, health, safety issues and the responsibilities that go along with the scientific practice. One of the main objectives of any academic exercise, therefore, should be to produce well-groomed individuals who understand the significance of ethical values and abide by them even in the most pressing circumstances. In this programme, this process is enabled through courses and facilitators who integrate the teaching of ethics in everyday pedagogy. As such, at the end of this programme students will be able to develop, internalise and exercise ethics in their professional as well as personal practices.

(5) PO-5: Life-long learning: 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, competiveness and employability.

(6) PO-6: Value education and Ethics: A special value education classes along with the course classes were also taken by the teachers where students will be taught about the values and ethics w.r.t society, institution, family, nation and future. With these efforts students will be able to recognize the need for, and have the preparation and ability to engage in independent with values and ethics in every broad context of technological changes.