B. Sc. Biotechnology

Name of Program	**M. Sc. Integrated Biotechnology**
Abbreviation	**BT**
Duration	**3 Years**
Eligibility Criteria	**12th Science passed from GHSEB, CBSE, ICSE with "B or AB" group**
Objective of Program	To convey scientific and technological knowledge and information with modern age orientation. To help young learners and realize that science and technology, both hand in hand can enrich and develop a personality, thus promising a life of success and achievement.
Program Outcome	• **PO1: Think Critically:** Get ability to apply the process of science by formulating hypotheses and design experiments based on the scientific method. • **PO2: Problem analysis:** Analyse and interpret results generated through studies in Master of Science, taxonomical treatments, field studies, excursion tours and laboratory techniques used in the subject. Identify credible scientific sources to interpret and evaluate the evidences. • **PO 3: Reasoning ability:** Use quantitative reasoning by using mathematical calculations and graphing skills to solve problems in the field of science. • **PO 4: Team work:** Students would perform functions that demand higher competence in national/international organizations with sporty spirits and helping each other. • **PO 5: Communication Skill:** Effective Communication and collaborate with other disciplines by effectively communicating the fundamental concepts of Biological Science in written and oral format. • **PO 6: Ethical awareness:** Understand the relationship between science and society by recognizing and discussing logical, scientific and ethical issues in Biological science subject. • **PO 7: Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development with respect location and biological annotation genes of different species. to assessment, conservation and utilization of floral diversity • **PO 8: Digitally literate:** Capable of using computers for Bioinformatics and computation and appropriate software for analysis of genomics and proteomics data, and employing modern bioinformatics search tools to locate, retrieve, and evaluate • **PO 9: Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes • **PO 10: Global thinking:** Knowledgeable disciple students with good values, ethics, and kind heart will help in nation building globally.
Program Specific Outcomes	Students will be able to appear and qualify for competitive exams like NET, GSET, and GATE. They will be skilled enough to join any research institute, Biopharma industry or even start ventures of their own. PSO1: Postgraduate students will be able to demonstrate and apply the principles of bioprocess engineering in the design, analysis, optimization and simulation of bioprocess operations.

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<tr><td></td><td>PSO2: Students will be able to gain fundamental knowledge in animal and plant biotechnology and their applications.

PSO3: Students will be able to (a) To elaborate concepts of biochemistry with easy to run experiments; (b) To familiarize with basic laboratory instruments and understand the principle of measurements using those instruments with experiments in biochemistry.

PSO4: Students will be able to understand various facets of molecular procedures and basics of genomics, proteomics and metabolomics that could be employed in early diagnosis and prognosis of human diseases.

PSO5: Students will be able to gain hands on experience in gene cloning, protein expression and purification.

PSO6: This experience would enable them to begin a career in industry that engages in genetic engineering as well as in research laboratories conducting fundamental research.</td></tr>
<tr><td>Mapping between POs and PSOs</td><td>
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M. Sc. Biotechnology

Name of Program	**M. Sc. Integrated Biotechnology**
Abbreviation	**BT**
Duration	**2 Years**
Eligibility Criteria	**B. Sc. Biotechnology/Microbiology/Biochemistry**
Objective of Program	To convey scientific and technological knowledge and information with modern age orientation. To help young learners and realize that science and technology, both hand in hand can enrich and develop a personality, thus promising a life of success and achievement.
Program Outcome	• **PO 1: Think Critically:** Get ability to apply the process of science by formulating hypotheses and design experiments based on the scientific method. • **PO 2: Problem analysis:** Analyse and interpret results generated through studies in Master of Science, taxonomical treatments, field studies, excursion tours and laboratory techniques used in the subject. Identify credible scientific sources to interpret and evaluate the evidences. • **PO 3: Reasoning ability:** Use quantitative reasoning by using mathematical calculations and graphing skills to solve problems in the field of science. • **PO 4: Team work:** Students would perform functions that demand higher competence in national/international organizations with sporty spirits and helping each other. • **PO 5: Communication Skill:** Effective Communication and collaborate with other disciplines by effectively communicating the fundamental concepts of Biological Science in written and oral format. • **PO 6: Ethical awareness:** Understand the relationship between science and society by recognizing and discussing logical, scientific and ethical issues in Biological science subject. • **PO 7: Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development with respect location and biological annotation genes of different species. to assessment, conservation and utilization of floral diversity • **PO 8: Digitally literate:** Capable of using computers for Bioinformatics and computation and appropriate software for analysis of genomics and proteomics data, and employing modern bioinformatics search tools to locate, retrieve, and evaluate • **PO 9: Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes • **PO 10: Global thinking:** Knowledgeable disciple students with good values, ethics, and kind heart will help in nation building globally.
Program Specific Outcomes	Students will be able to appear and qualify for competitive exams like NET, GSET, and GATE. They will be skilled enough to join anyresearch institute, Biopharma industry or even start ventures of their own. PSO1: Postgraduate students will be able to demonstrate and apply the principles of bioprocess engineering in the design, analysis, optimization and simulation of

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