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Undergraduate Program

BE Biomedical Engineering

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Introduction

The Bachelor of Engineering (BE) in Biomedical Engineering at Salim Habib University is a comprehensive four-year degree program designed to provide students with the essential skills and knowledge needed to excel in the rapidly evolving fields of biomedical technology, healthcare innovation, and medical device development.

The program is meticulously crafted to meet the demands of both academic and industrial careers, ensuring that students graduate with a strong foundation in the principles of biomedical engineering and are well-prepared to:

Innovate in the development and improvement of medical devices and technologies.

Apply engineering principles to solve complex healthcare challenges.

Integrate biological sciences with engineering techniques to improve patient care.

Engage in cutting-edge research and development within the biomedical industry.

Collaborate effectively with professionals across multidisciplinary teams in healthcare and engineering settings.

This program not only prepares students for immediate entry into the workforce but also provides a solid foundation for further studies and research in biomedical engineering and related fields.

Consistency of Vision and Mission of DBME with Vision and Mission of SHU

SHU Vision	DBME Vision
✓	✓
SHU Mission	DBME Mission
✓	✓

Mapping of PEOs with DBME Vision and Mission Statements

	PEO 1	PEO 2	PEO 3
DBME Vision	✓	✓	✓
DBME Mission	✓	✓	✓

Mapping of PLOs and PEOs

The twelve PLOs, defined for the Biomedical Engineering Program, are mapped to the three PEOs. Mapping of the PLOs to PEOs.

	PEO 1	PEO 2	PEO 3
Engineering Knowledge	✓		
Problem Analysis	✓		
Design/Development of Solutions	✓		
Investigation	✓		
Modern Tool Usage	✓		
The Engineer and Society		✓	
Environment and Sustainability		✓	
Ethics		✓	
Individual and Team Work		✓	
Communication		✓	
Project Management			✓
Lifelong Learning			✓

Undergraduate Biomedical Engineering Curriculum Design

The curriculum is designed to provide knowledge, analytical and leadership abilities, critical thinking and ethical values to cope with technological challenges. Complex Engineering Problems (CEPs), Problem Based Learning (PBL) and Open Ended Labs (OELs) are also included in relevant courses to equip the students for lifelong learning as guided by OBE. The management courses provide students an insight of entrepreneurship and management skills.

About Program

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Internship and Career Prospects

► Details

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Program Learning Outcomes (PLOs):

List of Electives

Course Code	Course Title	Pre-requisites	Credit Hours
CSC 408	Artificial Intelligence	N. A	3 + 0
BME 307	Introduction to Molecular Biology	BSC 101, BSC 103	2 + 1
BME 403	Introduction to Bioinformatics	BME 307	2 + 1
BME 321	Telemedicine Systems	N. A	3 + 0
BME 411	Rehabilitation Engineering	N. A	2 + 1
BME 421	Medical Device Quality System and Standards	N. A	3 + 0

BME 422	Hospital Information Management Systems	N. A	3 + 0
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Scheme of Study (Semester Wise)

Duration:4 Years

Semesters:8

Credit Hours:138(For Batches till 2023)

139(For Batch 2024 and onwards)

For 2024 batch and onwards

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