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Doctorate Program

Ph.D. Biomedical Engineering

Faculty of Engineering

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Faculty of Engineering

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Introduction

The PhD program in Biomedical Engineering at Salim Habib University is an advanced research degree program that combines knowledge of the medical sciences with engineering principles to address healthcare issues. The goal of the PhD program in biomedical engineering is to train aspirational scientists who are passionate about advancing medical science by fusing engineering principles with biological and medical sciences. Our curriculum offers a unique opportunity to learn more about the field of biomedical engineering. The curriculum will include expert-designed electives that are customized to each student's research interests in addition to courses in engineering physiology, biostatistics, and biomedical research ethics. In addition, students get the opportunity to work with faculty experts and gain real-world research experience in cutting-edge labs.

Interdisciplinary Approach: Engage in cutting-edge research, synthesising models and high-tech engineering principles to develop innovative solutions for real-world challenges, to transform the healthcare sector.
Mentorship: Learn how to integrate emerging technologies to develop smart solutions under the guidance of professors with rich multidisciplinary experience.
Hi-tech Laboratories: Gain hands-on experience in laboratories with high-tech equipment, enabling experimental analysis to produce novel research and solutions to solve complex problems.
Research Opportunities: Explore a broad spectrum of research projects on rehabilitation engineering, biomaterials and tissue engineering, artificial intelligence and medical device design, advanced physiological modelling, standardisation and regulation of medical devices, and more.
Collaborations: Benefit from opportunities for national and international collaborations and linkages to produce marketable solutions with global impact.

Program Structure

1. Coursework (18 Credit Hours):
    - **Core Courses:**Courses related to engineering physiology, ethics, biostatistics, and effective communication in biomedical engineering for developing the generalized knowledge of students in the field of biomedical engineering.
    - **Elective Courses:**Specialized and advanced courses like Physiological modeling, biomedical sensors and instrumentation, Biomedical systems and imaging, biomedical signal processing, tissue engineering, biomaterials that are customized to student's research interests.
2. Research work (30 Credit Hours):
    - **Lab Rotations:**Provide introductory experience to students in different research areas of the biomedical engineering field.
    - **Thesis Research:**The student needs to complete an in-depth research project under the guidance of experienced and qualified professors.
3. Seminars and Workshops: Students should participate regularly in departmental seminars, trainings, and workshops to stay updated with the latest research.

Research Opportunities

The PhD candidates can choose from a variety of research areas to investigate, such as:

- Developing novel medical devices and imaging technologies
- Advancements in tissue engineering and biomaterials
- Development of biological system computational models, etc.

About Program

▶

Internship and Career Prospects

▶ Details

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Ph.D Curriculum in Biomedical Engineering

Scheme of Study (Semester Wise)

▶

Scheme of Studies for Ph.D in Biomedical Engineering

▶ Details

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