

Biomedical Engineering Program (BME)-Program Matrix





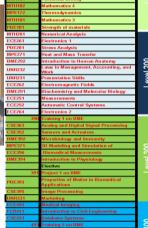






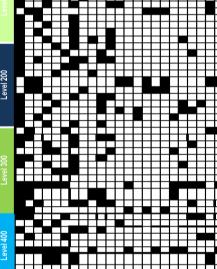




















Aims Graduation Specifications

To reach the innovation honor and leadership Locally and Regionally in the field of medical engineering and its applications



Vision

Preparation excellent engineers and the 1. pioneers qualified in Biomedical Engineering. In order to be capable of computation Locally and Regionally in the fields of practical 2. applications and scientific research to be a role model in the development of society and Resources development

Mission



Faculty Dean Prof. Mohamed Abd-Elazeem Mohammed

Vice Dean for Education and Student Affairs Prof. Mohammed Gamal Mahdy

- Apply knowledge of mathematics, science, and engineering concepts to solve fundamental engineering problems, and to design a system, components, and process to meet the required needs within realistic constraints and interpret its
- Communicate and work effectively within multi-disciplinary teams and show contextual understanding as well as professional and ethical responsibilities considering the impacts of engineering solutions on society.
- Encourage the in-self and life-long learning to acquire the required knowledge, skills, techniques, and the appropriate engineering tools, and apply them to the most recent and contemporary engineering issues and make the decisions related to managing projects.
- Apply basic knowledge of science to conduct experiments that help in the design of digital biomedical systems and solving problems at the interface of engineering and
- Use modern techniques and skills to design biomedical systems in a teamwork manner considering professional and ethical responsibilities in biology and evaluate the economics, technical aspects, and societal impact of these biomedical systems.
- Acquire modern technical awareness and use the accumulated knowledge to implement all the phases of the development life cycle of medical systems that are associated with the interaction between living and nonliving materials and identify patents, marketing, the regulatory environment, and quality control issues of these

Executive Manger Assoc. Prof. Hossam Eldeen Moustafa

- B1. Apply knowledge of life sciences, advanced mathematics, physical sciences, life sciences and engineering to biological and medical
- B2. Design, conduct and document laboratory experiments involving biological or medical digital systems.
- B3. Design digital systems, devices and processes for use in medicine, health care or biological applications.
- B4. Work within multidisciplinary teams consisting of engineers, clinicians, medical researchers, biologists, embedded systems, and nontechnical personnel.
- B5. Identify, formulate, and solve problems at the interface of engineering and biology
- B6. Consider professional and ethical responsibilities in biology and
- B7. Evaluate the economics, technical aspects, and societal impact of biomedical research, process development or product development.
- B8. Use modern techniques, skills and tools necessary for bioengineering practice and for disseminating the results of their work. B9. Obtain, analyze and interpret data from living systems, addressing
- the problems associated with the interaction between living and nonliving materials and systems using modern techniques **B10**. Recognize intellectual property and patents, marketing, the regulatory environment and quality control issues for products and
- processes used in medicine and health care. B11. Have modern technical awareness in appropriate specialist applications of technology in the Biomedical Engineering field.
- B12. Use accumulated knowledge to provide advice on the selection, use of, supervising performance testing of, and maintenance of medical equipment in clinic and hospital environments\

Program Coordinator Assis. Prof. Ehab Hany Abddelhay