Learning Outcomes for the Faculty of Science

(Medical Physics, Information Technology, Forensic Science)

Learning Outcomes for the Faculty of Science

The learning outcomes in the Faculty of Science aim to define the knowledge, skills, and competencies that students acquire after completing their study programs in the various scientific departments. This contributes to preparing graduates who are scientifically and practically qualified and capable of meeting the demands of the labor market and contributing to community service.

1. Learning Outcomes for the Department of Information Technology

Graduates of the Department of Information Technology are expected to achieve a set of learning outcomes, most notably:

1. Acquiring comprehensive knowledge of the fundamentals of information technology, including programming, databases, networks, and information security.
2. Mastering the use of several modern programming languages such as Java, Python, and C++, and employing them in developing software and computer applications.
3. The ability to analyze data and information using modern tools and techniques to draw useful conclusions.
4. Developing skills in solving complex technical problems through the application of critical thinking and logical analysis.
5. Possessing communication and teamwork skills that enable them to work effectively within multidisciplinary teams
6. To promote the concept of continuous learning and self-development to keep pace with the rapid advancements in the field of information technology.
7. Technical Knowledge: Students must acquire comprehensive knowledge of the fundamentals of information technology, including programming, databases, networks, and information security.
8. Programming Skills: Students must be able to write and develop programs using multiple programming languages such as C++, Java, and Python.

Data Analysis: Students must be able to analyze data and use various analytical tools to extract valuable information.

10. Problem-Solving: Students must be able to apply critical thinking to solve complex technical problems.

Effective Communication: Students must possess strong communication skills, both oral and written, to enable them to work effectively within multidisciplinary teams

2. Learning Outcomes for the Medical Physics Department

Graduates of the Medical Physics Department are expected to achieve a range of scientific and professional competencies, the most important of which are:

1. Understanding the basic principles of physics and their applications in the medical and health fields.
2. Familiarity with medical technologies used in diagnosis and treatment, such as MRI, X-ray, and radiotherapy.
3. The ability to assess the risks associated with the use of medical devices and technologies and to apply occupational safety standards.
4. Possessing the skills to conduct scientific research and analyze results using modern scientific methods.
5. The ability to collaborate and work jointly with specialists in the fields of medicine, engineering, and technology.
6. Developing effective communication skills with patients and medical staff in a way that contributes to improving the quality of healthcare. healthcare.

Detailed Learning Outcomes

1. Physical Knowledge: Students should understand the basic principles of physics and their application in the medical field.
2. Medical Technologies: Students should be familiar with modern medical technologies such as MRI, X-ray, and radiotherapy.
3. Risk Assessment: Students should be able to assess the risks associated with the use of medical technologies and apply safety standards
4. Scientific Research: Students should be able to conduct scientific research and critically analyze the results.
5. Interdisciplinary Collaboration: Students should possess the skills to collaborate with professionals in the fields of medicine, engineering, and technology.
6. Communication with Patients: Students should be able to communicate effectively with patients and understand their needs.

3. Learning Outcomes for the Forensic Science Department

The Forensic Science Department aims to prepare graduates who possess the scientific knowledge and applied skills necessary to analyze forensic evidence using modern scientific methods. The most prominent learning outcomes include:

1. Acquiring fundamental knowledge in forensic science and its applications in crime analysis and criminal investigations.
2. The ability to analyze biological, chemical, and physical evidence related to a crime scene using advanced scientific techniques.
3. Familiarity with methods of collecting, preserving, and documenting forensic evidence according to approved scientific and legal standards.
4. Using modern techniques in analyzing digital and forensic evidence to support investigations and crime detection.
5. Developing analytical thinking and scientific deduction skills in interpreting the results of forensic examinations.

6. Ability to work within multidisciplinary teams and cooperate with security and judicial authorities in criminal investigations.