

King Saud University
College of Applied Medical Sciences
Biomedical Technology Department
BMT227: Principles of Computing 2 (1-1-0)

Current Instructor: Mr. Abdullah BenOmran

Course Coordinator: Mr. Abdullah BenOmran

Coordinator's email: abenomran@gmail.com

Textbook(s) and/or Other Required Materials: or Other Required Materials:

- Computers Are Your Future, Bill A Daley, 9th Edition, Pearson, 2010.
- The 2007 Microsoft Office System Step by Step, Joyce Cox, Steve Lambert, et al, and Curtis Frye, 2008.

Course Description (catalog): This course focuses on the basic concepts and components of the computer system (Software & Hardware) and identifies different operating systems, especially windows operating system. Also it teaches in detail the latest office productivity tools such as Microsoft Office Suite (Excel, Access). Successful completion of this course will enable the student to be equipped with necessary knowledge and skills to be able to effectively use and utilize a computer system.

Prerequisites: None

Co-requisite: None

Course Type: Mandatory

Course Learning Outcomes:

Upon completing BMT227 course, students should have the following capabilities:

- Knowledge of fundamental principles of computer components (hardware and software) and information technology
- Knowledge of weakness and strength of most popular operating systems.
- Knowledge of essential system utilities
- Knowledge of how discovering and solving computer problems.
- Ability of analyzing data using Microsoft Excel.
- Ability of creating and managing database using Microsoft access

Student Outcomes Covered by Course:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of biomedical technology to include the application of circuit analysis, analog and digital electronics, microcomputers, biomechanics, biomedical instrumentation systems, and safety in the building, testing, operation, and maintenance of biomedical equipment.

[Apply the knowledge, techniques and skills for information technology activities](#)

b. an ability to select and apply a knowledge of mathematics, chemistry, physics, and biological sciences, engineering, and technology to building, testing, operation, and maintenance of biomedical equipment and the ability to utilize statistics/probability, transform methods, discrete

mathematics, or applied differential equations in support of biomedical systems.

c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.

Students conduct analyze, and interpret data using computers. Students analyze and solve computer problems (hardware and software)

d. an ability to analyze, design, and implement biomedical systems, components or processes for broadly-defined engineering technology problems appropriate to program educational objectives.

e. an ability to function effectively as a member or leader on a technical team.

f. an ability to identify, analyze, and solve broadly-defined biomedical technology problems.

g. an ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature.

h. an understanding of the need for and an ability to engage in self-directed continuing professional development.

i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.

j. a knowledge of the impact of engineering technology solutions in a societal and global context and an understanding of the clinical application of biomedical equipment.

k. a commitment to quality, timeliness, and continuous improvement.

Covered

Major Topics covered and schedule in weeks:

1. Overview: Introduction to the course.
2. Basic Terminology and Concepts.
3. The Information Processing Cycle.
4. Types of Computers for Individual and Organization.
5. Internet Services.
6. System Software-operating system and its functions.
7. Exploring Popular Operating Systems.
8. System Utilities and Troubleshooting
9. How computers represent data.
10. Inside System Unit.
11. Outside System Unit.
- 12-13. Database concepts.
14. Database programs.