



Sample Brief Course Description

Course title	Medical Informatics
Course code	BME 350
College	Engineering
Department / Program	Biomedical Engineering
Year/ Level	4/7
Course Type	A. <input type="checkbox"/> University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others b. <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective
Credited Hours	3
Contact Hours	(LT: 2, LB: 2, TR: 0)
Pre-requisites (if any)	---
Co-requisites (if any)	---
Course description	The course introduces Introduction to Medical Informatics (Introduction – Medical Informatics – Bioinformatics – Health Informatics - Structure of Medical Informatics –Functional capabilities of Hospital Information System - On-line services and Off – line services



	<p>- Dialogue with the computer), Medical Data Storage and Automation (Representation of Data, Data modeling Techniques, Relational Hierarchical and network Approach, Normalization techniques for Data handling - Plug-in Data Acquisition and Control Boards – Data Acquisition using Serial Interface – Medical Data formats – Signal, Image and Video Formats – Medical Databases - Automation in clinical laboratories - Intelligent Laboratory Information System – PAC) , Medical Standards (Evolution of Medical Standards – IEEE 11073 - HL7 – DICOM – IRMA - LOINC – HIPPA –Electronics Patient Records – Healthcare Standard Organizations – JCAHO (Join Commission on Accreditation of Healthcare Organization) - JCIA (Joint Commission International Accreditation) - Evidence Based Medicine – Bioethics) , Recent Trends In Medical Informatics (Medical Expert Systems, Virtual reality applications in medicine, Virtual Environment – Surgical simulation - Radiation therapy and planning – Telemedicine – virtual Hospitals - Smart Medical Homes – Personalized e-health services – Biometrics - GRID and Cloud Computing in Medicine).</p>
<p>Course Main Objectives</p>	<ol style="list-style-type: none"> 1. Understand the development of technology for support health. 2. Learn the improved healthcare methods to meet greater expectations on the health service.
<p>Learning Outcomes</p>	<p>Knowledge and Understanding:</p> <ol style="list-style-type: none"> 1. Identify basics of telemedicine and its applications. 2. Classify the technologies and standards. <p>Skills:</p> <ol style="list-style-type: none"> 1. Evaluate systems based on the criteria and its impact on environment and user. 2. Create the telehealth technologies for future challenges in population. <p>Values:</p> <ol style="list-style-type: none"> 1. Communicate effectively through teamwork.



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وكالة الجامعة للشؤون التعليمية
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الإصدار الأول
محرم 1441 هـ