



مركز الاعتماد
وإضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

Special Topics in Medical Physics (0302795)

Special Topics in Medical Physics (795)

I. Syllabus

Part 1 : Terminology, Modeling, and Measurements

Part 2 : Forces on and in the body : Statics, Frictional forces and dynamics

Part 3 : Physics of the skeleton

What is bone made of? how strong are your bone? Lubrication of bone joints, Measurements of bone mineral in the body.

Part 4 : Heat and cold in medicine.

Thermography (mapping the body's temperature), heat therapy, use of cold -in medicine, cryosurgery, safety with cryogenics.

Part 5 : Pressure:

Measurement of pressure in the body, pressure in the urinary bladder, pressure effects-while diving, hyperbaric oxygen therapy (HOT)

Part 6 : The physics of the lungs and breathing

The airways, how the blood and lungs interact, physics of the alveoli, physics of some common lung diseases.

Part 7 : Physics of the cardiovascular system.

Major components of the cardiovascular system, O_2 and CO_2 exchange in the in the capillary system, work done by the heart, blood pressure and its measurement, Bernoulli's principle applied to the cardiovascular system, the physics of cardiovascular diseases.

II. Recommended Text books :

1. Medical Physics by :

John R. Cameron and James G. Skofronick
John Wiley and Sons 1978. ...

2. Intermediate Physics for Medicine and Biology by : Russell K. Hobbie

John Wiley and Sons. Second Edition 1988.

Lecturer : Dr. Issa Al-Shakhras

E-mail :issashak@yahoo.com

Office number : 015 (Physics, Ground Floor)

Office hours : Sunday from 14 - 15

III. Examinations : To be announced later