

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Baghdad University- Al-Khwarizmi College of Engineering
2. University Department/Centre	Biomedical Engineering
3. Course title/code	Artificial Organs 1
4. Programme(s) to which it contributes	BSc in Biomedical Engineering
5. Modes of Attendance offered	Full time attendance
6. Semester/Year	One Semesters per year
7. Number of hours tuition (total)	45 hours in the semester
8. Date of production/revision of this specification	
9. Aims of the Course	
By the end of this course, The students will be able to: 1- know the theory and background of the design of an artificial organ, the first task is to establish the specification for the device i.e. the function or functions which must be fulfilled by a human made construct and the physical constraints that apply because the device must interface with the	

human body.

2- Concepts underlie the design and analysis of an artificial medical device that is not surgically implanted and that is used to replace a missing limb, or another external human body part including an artificial limb, hand, or foot

10. Learning Outcomes, Teaching ,Learning and Assessment Methods

A- Knowledge and Understanding

- A1.
- A2.
- A3.

B. Subject-specific skills

- B1.
- B2.
- B3.

Teaching and Learning Methods

- Lectures where the students write information presented to them via slide show, overhead or written by the lecturer;
- Lectures where the students have some printed notes/handouts and may annotate, or expand these during a spoken lecture;
- Question and answer sessions during lectures or staff Office Hours;

Assessment methods

- Written examinations (Summative assessment);
- Oral presentations of individual and group work;
- Homework;

C. Thinking Skills

- C1.
- C2.
- C3.
- C4.

Teaching and Learning Methods

External lectures from industry or clinicians;

- Feedback given to students during tutorials;
- Question and answer sessions during lectures or staff Office Hours

Assessment methods

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1. D2.
Teaching and Learning Methods
<ul style="list-style-type: none"> • Lectures where the students have some printed notes/handouts and may annotate, or expand these during a spoken lecture; • Lecture material placed on web-pages. • Question and answer sessions during lectures or staff Office Hours;
Assessment Methods
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11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	2018	Introduction to Artificial Organs		

2	2018	Upper and Lower Prostheses		
3	2018	Normal gait		Quiz 1
4	2018	The Gait Cycle in Detail		
5	2018	Ground Reaction Forces		
6	2018	Energy Calculation Methods		
7	2018	Prosthetic Foot Characteristics		Test 1
8	2018	prosthetic foot components		
9	2018	prosthetic foot designs		
10	2018	prosthetic Socket design		Quiz 2
11	2018	Artificial Knee Prosthetics		
12	2018	Upper Limbs prosthetics		
13	2019	Artificial Hand		
14	2019	Artificial Elbow		Test 2
15	2019	Artificial Shoulder		

13. Admissions	
Pre-requisites	Rehabilitation Engineering
Minimum number of students	10
Maximum number of students	40

12. Infrastructure	
<p>Required reading:</p> <ul style="list-style-type: none"> · CORE TEXTS · COURSE MATERIALS · OTHER 	<p>1 - Biomechanics of Lower Limb Prosthetics by Mark R. Pitkin</p> <p>2- Advances for Prosthetic Technology by Robert LeMoyne</p> <p>3- Artificial Limbs V2 by Paul E. Klopsteg et. al.</p>
<p>Special requirements (include for example workshops, periodicals, IT software, websites)</p>	
<p>Community-based facilities (include for example, guest Lectures , internship , field studies)</p>	