



Course Specifications

Program(s) on which this course is given:	Systems and Biomedical Engineering
Department offering the program:	Systems and Biomedical Engineering
Department offering the course:	Systems and Biomedical Engineering
Academic Level:	Graduate students
Date	2015-2016
Semester (based on final exam timing)	■ Fall ■ Spring

A- Basic Information

1. Title:	Advanced Topics in Biomedical Engineering (III)			Code:	SBE-718			
2. Units/Credit hours per week:	Lectures	2	Tutorial		Practical		Total	2

B- Professional Information

1. Course description:	Introduction to one way analysis of variance and two way analysis of variance. Introduction of simple regression, multiple regression, and model building.
2. Intended Learning Outcomes of Course (ILOs):	a) Knowledge and Understanding
	1- Understand theories and fundamentals of area of specialization and other fields related to professional practice
	b) Intellectual Skills
	2- Ability of problem solving in the field of specialization 3- Capability of information analysis to topics related to field of specialization
	c) Professional and Practical Skills
	d) General and Transferable Skills
	4- Effective communication in all its forms 5- Capable of time management

3. Contents

Topic	Total hours	Lectures hours	Tutorial/ Practical hours
One way ANOVA	2	2	
Two way ANOVA	2	2	
Simple regression (part 1)	2	2	
Simple regression (part 2)	2	2	

Introduction to multiple regression (Part 1)	2	2	
Introduction to multiple regression (part 2)	2	2	
Multiple regression (Model building)	2	2	
Project interaction, and added educational items (e.g. backward elimination method, elimination of outlying observations, etc.)	4	4	
4. Teaching and Learning Methods	Lectures (*)	Practical Training/ Laboratory ()	Seminar/Workshop ()
	Class Activity ()	Case Study ()	Projects (*)
	E-learning ()	Assignments/Homework ()	Other:
5. Student Assessment Methods			
• Assessment Schedule		Week	
-Assessment 1; Class test			
-Assessment 2; Project Assignment		After lectures are done	
-Assessment 3; Presentations			
-Assessment 3; Midterm Exam			
-Assessment 4; Final Exam			
• Weighting of Assessments			
-Mid-Term Examination			
-Final-term Examination			
-Project		100%	
-Class Test			
-Presentation			
-Total		100%	
6. List of References			
D. Levine, D. Stephan, T. Krehbiel, and M. Berenson, "statistics for managers", sixth edition, Pearson Prentice hall, 2011			
7. Facilities Required for Teaching and Learning			
Board and markers			
Course Coordinator:	Dr. Mohamed Sherin. A. Kamel		
Head of Department:	Prof. Dr. Ahmed Badawi		