



Course Specifications

Program(s) on which this course is given:	Aerospace Engineering
Department offering the program:	Aerospace Engineering
Department offering the course:	Aerospace Engineering
Academic Level:	Ph.d.
Date	
Semester (based on final exam timing)	<input type="checkbox"/> Fall <input type="checkbox"/> Spring

A- Basic Information

1. Title:	System Analysis and design		Code:	AER680				
2. Units/Credit hours per week:	Lectures	3	Tutorial		Practical		Total	3

B- Professional Information

1. Course description:	
2. Intended Learning Outcomes of Course (ILOs):	a) Knowledge and Understanding
	Define the system basics
	Investigate the requirements for system development
	b) Intellectual Skills
	Understand the system elements and design requirements
	c) Professional and Practical Skills
	Apply the system design and analysis principles on real systems
	d) General and Transferable Skills
Write reports	

3. Contents			
Topic	Total hours	Lectures hours	Tutorial/ Practical hours
System Definition, Attributes, Properties, and Characteristics	3		
System Roles and Stakeholders and Life Cycle	3		
Systems Architecture and Levels of Abstraction	3		
Operating Environment Architecture and System	3		

Interfaces			
Organizational Roles, Missions, and System Applications	3		
System Mission Analysis	3		
System Operations Model	3		
System Phases, Modes, and States of Operation	3		
System Operational Capability	3		
System Analysis Synthesis	3		
System Development Strategy	3		
System Development Models	3		
Specification Requirements, Analysis and Development	3		
2. Teaching and Learning Methods:	Lectures ()	Practical Training/ Laboratory ()	Seminar/Workshop ()
	Class Activity ()	Case Study ()	Projects ()
	E-learning ()	Assignments /Homework ()	Other: Reading Course
• Assessment Schedule	Week		
-Assessment 1; Class test			
-Assessment 2; Project Assignment			
-Assessment 3; Presentations			
-Assessment 3; Midterm Exam			
-Assessment 4; Final Exam			
• Weighting of Assessments			
-Mid-Term Examination			
-Final-term Examination			
-Project			
-Class Test			
-Presentation			
-Total			
6. List of References			

7. Facilities Required for Teaching and Learning

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Course Coordinator:	Dr. Aref Rashad
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Head of Department:	Prof. Ayman Kassem
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