

**DEPARTMENT OF INDUSTRIAL ENGINEERING
COURSE SYLLABUS**

<i>COURSE TITLE</i>	<i>ENGLISH CODE/NO</i>	<i>ARABIC CODE/NO.</i>	<i>CREDITS</i>			
			<i>Th.</i>	<i>Pr.</i>	<i>Tr.</i>	<i>Total</i>
System analysis and design	IE 352	352 ص هـ	3	2	-	3
<i>Pre-requisites:</i>	IE 351					
<i>Course Role in Curriculum</i>	<i>Required or Elective:</i>		Required Core Course			
<i>Catalogue Description:</i> System definition, characteristics and concepts. Systems development projects: identification, selection, initiation, planning and managing. System analysis: determining and structuring requirements. System design: overview, forms and reports, interfaces and dialogues, and finalizing design specifications. Designing distributed and internet systems. System implementation and maintenance.						

Textbooks:

Shelly, Rosenblatt, **Analysis and Design for Systems**, ISBN: 978-0-538-48162-5, Cengage Learning 9th Ed (2011).

Supplemental Materials:

Hoffer, J. A., George, J. F. and Valacich, J. S., **Modern System Analysis and Design**, 4th ed., Prentice Hall, (2005), ISBN: 0-13-127391-4.

Kendal and Kendal, **System Analysis and Design**, 4th Prentice Hall, ISBN: 0-13-954934-X

Course Learning Outcomes:

By the completion of the course the student should be able to:

1. Understand systems concept, system analysis and design as well as other related concepts and terminology
2. Understand system development methods.
3. Comprehend system development life cycle and its phases.
4. Identity, select and evaluate feasibility of an IS project.
5. Plan, schedule and manage the project.
6. Use modelling tools and techniques to structure systems requirements.
7. Design output and user interface.
8. Design appropriate database for the selected project.
9. Understand system architecture including web architecture.
10. Understand system testing, implementation and maintenance.
11. Use state of the art technology for system analysis and design.

<u>Topics to be Covered:</u>		<u>Duration in Weeks</u>
1	Introduction to system analysis and design	2
2	Analyzing the business case	2
3	Selection of appropriate designs for comparative and factorial experiments	1
4	Managing system projects	1
5	Requirements modelling, data and process modelling, development strategies	4
6	Output design, user interface design and data design	3
7	Implementation and system's support	1

Student Outcomes addressed by the course: (Put a √ sign)

(a)	an ability to apply knowledge of mathematics, science, and engineering	
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	√
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	√
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	√

Key Student Outcomes assessed in the course: (c) and (e)

Instructor or course coordinator: Dr Rami H Alamoudi

Last updated: February 2015