IE 462: Industrial Information Systems 2(2, 1, 1)

Catalog Data	Analysis, design and implementation of industrial information systems with special focus placed on given to manufacturing systems; Database modeling and design, Structured and Object Oriented analysis and design; e-business.
Prerequisite	**IE 314**
Co requisite	**None**
Level	**10**
Textbook	Thomas Boucher & Ali Yalcin, "Design of Industrial Information Systems", Academic Presss – Elsevier, 2006.
Reference	Jeffrey Hoffer, Joey Goerge & Joseph Valacich, "Modern Systems Analysis and Design", Pearson Education International, Upper saddle river, fourth edition, 2011.
Learning Objectives	To get the student acquainted with information system (IS) development concepts, life cycles, and tools, with special focus placed on Industrial IS (IIS). To have the students able to develop and communicate industrial information systems models.

Topics (classes)

	Topic	Week	Hours
1.	Introduction to IS development	1	4
2.	Database modeling and design	4	16
3.	Structured analysis and functional architecture design	3	12
4.	Informational architecture and logical design	1	4
5.	Object-oriented analysis and design (UML)	4	16
6.	E-business and web-enabled database	1	4

Laboratory Topics	Database implementation Microsoft Access 2007 (Tables and Queries creation, SQL queries, Forms, Reports) Database and UML modeling, using Microsoft Visio 2007
Project work	Design of a complete IIS project case study: Database & UML models
Computer Usage	Microsoft Access 2007, Microsoft Visio 2007

Learning outcomes

1.	Understand the role, instances, components, and development life cycles, of the information systems in industrial and service organizations.**[f,i,j]**
2.	Acquire the ability to model, design and implement relational database. **[c,f,i,j]**
3.	Acquire the ability to model the functions, logical architecture and data flows of IS. **[c,f,j]**
4.	Acquire the ability to model and design the User interface. **[c,f,j]**
5.	Acquire the ability to model and design Object-oriented IS. **[c,f,i,j]**
6.	Get acquainted with development and role of e-business and web-enabled database as IS for the supply chain. **[f,i,j]**

Total contact hours per semester

Lecture:	Tutorial:	Laboratory:	Practical/Field work/Internship:	Other: design studio:
28	**18**	**10**		**8**

Additional private study/learning hours expected for students per week.	2 hours per week for Project case studies and report– 3 hours per week self-learning of course material and exercises solving.
Estimated Category Content	Engineering Science: **2(2, 1, 1)** credit hours Engineering Design: **3 credit hour**
Prepared by	Dr. Eng. Shady Aly
Preparation Date	September 2011

Student assessment schedule			
No.	**Assessment item**	**Week due**	**Proportion**
1	Class Attendance, reports & quizzes	Each lecture	10%
2	Lab. Work & attendance	Each lab.	10%
3	1st Mid-Term Exam	6th Week	10%
4	2nd Mid-Term Exam	12th Week	10%
5	Term Project	13th Week	20%
6	Final Exam	As scheduled by the registrar	40%