IE-462
Section 1, CRN: 33602/03/04
Section 2, CRN: 38318/19/20
Section 3, CRN: 76433/34/35

First Semester 1442H (Fall-2020) – 2(2,1,1)
"INDUSTRIAL INFORMATION SYSTEMS"

Course Description

Course-in-brief

Analysis, design and implementation of industrial information systems with special focus given to manufacturing systems and environments; Information systems development life cycle, and information systems requirements determination; Database modeling and design; Structured analysis and functional architecture design; Object-oriented analysis and design; E-business and web-based database.

Level: 9 (for more details: https://engineering.ksu.edu.sa/en/Bachelor_of_Science_in_IE)

Estimated Category Content:
Engineering science: 1 credit hour
Engineering design: 1 credit hour

Prerequisite: IE 314 – Industrial Operations Management – 2 (Level 6)

Co-requisite: None

Time and Place

Section 1	Section 2	Section 3
Lecture (33602): **Sun, Thu: 08:00 – 08:50 AM** (1-A-42)* Dr. El-Sherbeeny	Lecture (38318): **Sun, Tue: 10:00 – 10:50 AM** (1-B-12)* Dr. El-Sherbeeny	Lecture (76433): **Sun, Tue: 09:00 – 09:50 AM** (1-A-54/1)* Dr. El-Sherbeeny
Tutorial (33603): **Tue: 08:00 – 08:50 PM** (1-A-54/1)* Dr. El-Sherbeeny	Tutorial (38319): **Thu: 10:00 – 10:50 AM** (1-B-12)* Dr. El-Sherbeeny	Tutorial (76434): **Thu: 09:00 – 09:50 AM** (CAD/CAM Lab)* Dr. El-Sherbeeny
Lab (33604): **Mon: 02:00 – 02:50 PM** (1-A-60)* Engr. Tamer Jawad	Lab (38320): **Tue: 02:00 – 02:50 PM** (1-A-52)* Engr. Tamer Jawad	Lab (76435): **Wed: 02:00 – 02:50 PM** (1-C-13)* Engr. Tamer Jawad

* Online

Course Resources

Resources for the course include the instructor; textbook; references; class notes and handouts; your teammates; the library; and the World Wide Web.

Instructor
Ahmed M. El-Sherbeeny, PhD
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Phone (Office): +966-(0)11-496-8535

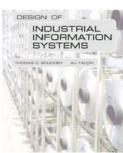**Teaching Assistants**
Tamer Jawad, MSIE; email: tamerje@gmail.com
Phone (Office): +966-(0)11-469-2669

Office Hours
I adopt an open-office policy. You are encouraged to come to my office and ask questions, consult, provide feedback, or give suggestions at any time during the day. Best times to find me in the office this semester are: **Sun, Mon, Tue, Wed: 03:00 – 05:00 PM**; or by appointment.
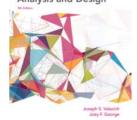
Textbook: *Design of Industrial Information Systems*.
Thomas Boucher, and Ali Yalcin. Academic Press. First Edition. 2006.
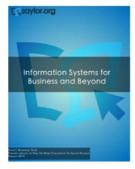 eBook ISBN: 9780080465531.

References:

- *Modern Systems Analysis and Design*.
  Jeffrey Hoffer, Joey Goerge & Joseph Valacich. Pearson.
  Eighth Edition. 2017. ISBN 13: 978-0-13-420492-5.

- *Information Systems for Business and Beyond*.
  David T. Bourgeois. The Saylor Academy (open textbook).
  2014. ISBN 13: 9781533064165.

Project Work
You will be asked to design a complete IIS project case study, including database, user forms design and development, and UML models. This will be discussed throughout the course in details.

Course Objectives

The course aims to get the student acquainted with information system (IS) development concepts, life cycles, and tools, with special focus placed on Industrial IS (IIS); to enable students to develop and communicate IIS models.

Intended Learning Outcomes (ILO's)

At the end of this course, students are expected to:

1. **Identify** and **apply** fundamental concepts and requirements regarding Industrial Information Systems, including relevant relational databases, and query languages. [**a**, **SO1**]
2. Use learned concepts to **design** and/or **improve** an industrial information **system** consisting of **material**, and/or **information**. [**c**, **SO2**]
3. Show the ability to **effectively** engage in a **teamwork** project to redesign a basic Industrial Information System. [**d**, **SO5**]

Course Policies

Homework Policy
There will be -at least- one semester-homework. This will be assigned around mid-semester and will consist of a group activity. Full details regarding this will be discussed in future weeks.

Attendance
Attendance is a must! Attendance will be taken at the **first minute** of each class period (lecture, tutorial, and lab). My policy for considering attendance is as follows (please take serious note of this):

- If you are present at the time of taking attendance (in your official section) you are considered **present**.
- If you arrive late for your official section, then you are counted as **half-present**, so long as you arrive before mid-session (i.e. in the first 25 minutes); if you arrive later than that, then you are counted as absent.
- If you arrive at the time of taking attendance in a section other than yours, then you are counted as **half-present**; if you arrive later than that, then you are counted as absent.
- If you are absent with a valid excuse, you must bring the original excuse within one week for it to be counted.

Students who absent themselves during a semester for more than 25% of the required number of lectures will not be allowed to continue the course, denied from sitting for the final examination, and assigned a course grade of DN, which is reported in their transcript. Note, please make note of the important college decision below regarding attendance during the first day of classes.

COE_KSU
@COE_KSU   Follow

🔴🔴🔴 إعلان 🔴🔴🔴
بناءً على التعميم الوارد من إدارة الجامعة فعلى
الطلاب التقيد بحضور المحاضرات من أول يوم
دراسي لجميع المقررات المسجلة أو المتوقع
تسجيلها علماً بأن نسبة الحضور والغياب تحتسب
من أول يوم دراسي بغض النظر عن تاريخ تسجيل
المقرر.

5:22 AM - 4 Jan 2019

Class Discussion
Communication is very important in achieving collective goals and objectives. Feel free to voice your opinions and ask questions anytime during a class period. Practice your right and freedom to learn.

Help Sessions

Help sessions will be organized at convenient times as needed upon request from students.

Make-up Tests and Late Homework Policy

No makeup test will be given and late homework will not be accepted unless the reason is beyond the student's control. A valid, official excuse must be presented.

Expected Behavior

Practicing engineers are expected to conduct themselves in an ethical and professional manner. This includes attending all class activities; meeting deadlines; observing common courtesies to fellow students, teachers, and staff; being honest; making a diligent effort to learn; and not engaging in any disruptive, irresponsible manner. Legitimate collaboration is encouraged but academic dishonesty will not be tolerated.

Assessment and Evaluation

Many aspects of the course will receive on-going, real-time assessments and feedback to help improve students' performance. This will be done by discussing performance in class and by arranging individual meetings.

Assessment in the following areas will be converted to points, to compute your final grade in the course:

Assessment Item	Comment	Points*
Attendance	Used only to assess denial status	0%
Homework/Quizzes	Assigned once every 3-4 weeks	5%
Project	One semester project; Due 13th Week: **Thursday, Nov. 26, 2020 (11/4/1442H)**	20%
Lab activities	Participation; Reports; Exam	15%
Midterms	Two midterms (6th and 11th Weeks) **Midterm 1**: Tuesday, Oct. 06, 2020 (19/2/1442H), 8-9 PM **Midterm 2**: Tuesday, Nov. 10, 2020 (24/3/1442H), 8-9 PM	20%
Final Exam	Exams period: **Tuesday, Dec. 15, 2020 (30/4/1442H): 1:00 – 3:00 PM**	40%

***Tentative**

Course Curriculum:

Course topics*:

1. Introduction to IS development   (1 week)

2. Database modeling and design   (4 weeks)

3. Structured analysis and functional architecture design   (3 weeks)

4. Informational architecture and logical design   (1 week)

5. Object-oriented analysis and design (UML)*   (4 weeks)

6. E-business and web-enabled database*   (1 week)

Lab topics*:

1. Training Module 1: Building a Functional Model using IDEF0

2. Training Module 2: Modeling Entity Relationship Diagram (ERD) With MS Visio

3. Training Module 3: Building Database Using MS Access

4. Training Module 4: Creating User Interface: Forms & Reports

5. Training Module 5: Creating Unified Modeling Language (UML) Models With MS Visio

*** Tentative**

Course Outline*

Week	Date: Greg.	Topic*
1 (1A)		**Syllabus, course content** **Introduction**
2 (2A)		**1. Introduction to IS development**
3 (3A)		**2. Database modeling and design**
4 (4A)		**Cont. Database modeling and design**
5 (5A)		**Cont. Database modeling and design**
6 (6A)	**Tuesday, Oct. 06, 2020 (19/2/1442H)**	**Cont. Database modeling and design** **FIRST MIDTERM**
7 (7A)		**3. Structured analysis and functional architecture design**
8 (8A)		**Cont. Structured analysis and functional architecture design**
9 (9A)		**Cont. Structured analysis and functional architecture design**
10 (10A)		**Cont. Structured analysis and functional architecture design**
11 (11A)	**Tuesday, Nov. 10, 2020 (24/3/1442H)**	**Cont. Structured analysis and functional architecture design** **SECOND MIDTERM**
12 (12A)		**4. Informational architecture and logical design**

13 (13A)	**Thursday, Nov. 26, 2020 (11/4/1442H)**	**Cont. Informational architecture and logical design** **PROJECT PRESENTATIONS**
14 (14A)		**Object-oriented analysis and design (UML)* /** **E-business and web-enabled database*** **Revision**

* Tentative