

Syrian Arab Republic	 الجامعة الافتراضية السورية SYRIAN VIRTUAL UNIVERSITY	الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالي
Syrian Virtual University		الجامعة الافتراضية السورية

## Course Definition:

### 1- Basic Information:

<b>Course Name</b>	Database Architecture and Design
<b>Course ID</b>	IIS202
<b>Contact Hours (Registered Sessions)</b>	18
<b>Contact Hours (Synchronized Sessions)</b>	18
<b>Mid Term Exam</b>	
<b>Exam</b>	75min
<b>Registered Sessions Work Load</b>	18
<b>Synchronized Session Work Load</b>	18
<b>Credit Hours</b>	4

### 2- Pre-Requisites:

Course	ID
Introduction to Data Modeling	IIS101

### 3- Course General Objectives:

"Database Architecture & Design" subject talks about database systems and its architecture and data models definition in addition to structures concept and its relations and relative structures schematic, in addition to SQL language basics. The student recognizes in this subject:

- 1- Database system
- 2- Database and relative schematics design
- 3- Database management systems
- 4- Introduction to SQL language.

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#### 4- Intended Learning Outcomes (ILO):

Code	Intended Learning Outcomes
ILO1	Introduction to Database management systems
ILO2	Data Models
ILO3	Relational Model
ILO4	Entity Relationship Diagram (ERD)
ILO5	SQL Basics
ILO6	Transactions
ILO7	Data Warehouse.....

#### 5- Course Syllabus (18 hours of total synchronized sessions)

- **RS:** Recorded Sessions; **SS:** Synchronized Sessions;

ILO	Course Syllabus	RS	SS	Type	Additional Notes
ILO1	• Database management systems		1.5	Semester assignment	
ILO2	• Data Models		3		
ILO3	• Relational Model		1.5		
ILO4	• Entity Relationship Diagram (ERD)		3		
ILO5	• SQL Basics		4.5		

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ILO6	• Transactions		3		
ILO7	• Data Warehouse		1.5		

## 6- Assessment Criteria (Related to ILOs)

ISC	Interactive Synchronized Collaboration	Ex	Exams	Rpt	Reports
PF2F	Presentations and Face-to-Face Assessments	PW	Practice Work		

ILO Code	ILO	Intended Results	Assessment Type				
			ISC	PW	Ex	PF2F	Rpt
ILO1	Introduction to Database management systems		✓	✓	✓		✓
ILO2	Compare between Data Models		✓	✓	✓		✓
ILO3	Relational model specification		✓	✓	✓		✓
ILO4	Entity Relationship Diagram design		✓	✓	✓		✓
ILO5	SQL basics		✓	✓	✓		✓
ILO6	Transactions and Concurrency control		✓	✓	✓		✓
ILO7	Data Warehouse and its application		✓	✓	✓		✓

## 7- Main References

Fundamentals of Database Systems, Ramez Elmasri, S. B. Navathe. 7th Edition, 2015, Addison-Wesley

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## 8- Additional References

- Database Systems, C. J. Date, 6<sup>th</sup> Edition, 2000, Addison Wesley.
- Database Systems, Rob and Conrol, 4<sup>th</sup> edition, 2000, Course Technology.