



Course Specification

— (Bachelor)

Course Title: System Integration

Course Code: IT412

Program: BS IT

Department: Information Technology

College: College of Computer and Information Sciences

Institution: Majmaah University

Version: Course Specification Version Number

Last Revision Date: 10 October 2023



Table of Contents

A. General information about the course:	3
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods	4
C. Course Content	5
D. Students Assessment Activities	6
E. Learning Resources and Facilities	6
F. Assessment of Course Quality	7
G. Specification Approval	7



A. General information about the course:

1. Course Identification

1. Credit hours: 3 (3,0,1)

2. Course type

A. University College Department Track Others
 B. Required Elective

3. Level/year at which this course is offered: (Level 7)

4. Course general Description:

This course focuses on the integration of information systems in organizations, the process by which different computing systems and software applications are linked together functionally or physically. It examines the methods and strategies for combining a set of interdependent systems into a unified and functioning integrated system, where two or more applications are seamlessly interacting and exchanging data. The course will demonstrate the use of tools and techniques in systems integration as well as prove practices for integration projects.

5. Pre-requirements for this course (if any): CS 314

6. Pre-requirements for this course (if any):

7. Course Main Objective(s):

To make the students to

1. Integrate information systems in organizations
2. Apply the strategies and methods for blending a set of interdependent systems into a functioning or unified whole
3. Use tools and techniques for systems integration
4. Manage integration projects.



2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom		
2	E-learning	60	100
3	Hybrid <ul style="list-style-type: none"> Traditional classroom E-learning 		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	15
5.	Others (specify)	
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	5. Integrate information systems in organizations	CLO1	Lecture, exercises	Test, Assignments, Lab Assignments, Final and Mid exams
1.2	6. Apply the strategies and methods for blending a set of interdependent systems into a	CLO2	Lecture, exercises	Test, Assignments, Lab Assignments, Final and Mid exams





Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	functioning or unified whole			
...				
2.0	Skills			
2.1	7. Use tools and techniques for systems integration	CLO3	Lecture, exercises	Assignments, , Mini Project, Mid and Final Exam
2.2	8. Manage integration projects.	CLO4	Presentation	Assignments, , Mini Project, Mid and Final Exam
...				
3.0	Values, autonomy, and responsibility			

C. Course Content

No	List of Topics	Contact Hours
1.	· Application Integration Overview, Vertical Integration	4
2.	· Star Integration, Spaghetti Integration, Horizontal Integration or Enterprise Service Bus (ESB)	4
3.	· Business Oriented Integration, Service Oriented Integration	4
4.	· Portal Oriented Integration, Middleware Basics & Types	4
5.	· Linux Administration, Linux Security	4
6.	· Use tools and techniques for systems integration	3
7.	· Introduce the major design, implementation & distributed deployment issues regarding system integration	3
8.	· Manage integration projects, Network Operating Systems (NOS)	3
9.	· Cross platform database integration	3
	e-commerce and e-business applications implementation, cross-servers & multiple locations	3
	· e-sessions migration and the related communications security	4
	· Integration of information systems in organizations	3





· Knowledge of the integration of information systems in organizations	3
Total	45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignment	Week 2, 4,8	10%
2.	Mid Term	Week 9	20%
3.	Lab based Assignments	Week 6,9	10%
4.	Final Exam	Week 11	40%
5.	Quizzes	Week 6,10	20%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	<ol style="list-style-type: none"> 1. Next Generation Application Integration: From Simple Information to Web Services”, Linthicum, Addison-Weseley, 2003. 2. “Setting up LAMP” Rosebrock, Filson, Sybex, 2004
Supportive References	
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Simulation room
Technology equipment (projector, smart board, software)	
Other equipment (depending on the nature of the specialty)	



F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Faculty	Indirect
Effectiveness of Students assessment	Students	Indirect
Quality of learning resources		
The extent to which CLOs have been achieved		
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	IT COUNCIL
REFERENCE NO.	
DATE	

