هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

# Course Specification

| | |
|---|---|
| Course Title: | Systems Integration |
| Course Code: | IS1761 |
| Program: | Computer Information Systems |
| Department: | Computer Information Systems |
| College: | College of Computer Science & Information Technology |
| Institution: | AlBaha University, Al Baha, Saudi Arabia |
| Version: | T-104 V2 |
| Last Revision Date: | 18/01/2023 |

# Table of Contents:

# A. General information about the course:

| Course Identification | | | | | |
|---|---|---|---|---|---|
| **1. Credit hours:** | 3 Credit Hours (3, 0, 0) (Lecture, Lab, Tutorial)<br>(3 Contact Hours) | | | | |
| **2. Course type** | | | | | |
| a. | University ☐ | College ☐ | Department ☒ | Track☐ | Others☐ |
| b. | Required ☐ | Elective☒ | | | |
| **3. Level/year at which this course is offered:** | Elective course (11th Level/4th Year) | | | | |
| **4. Course general Description**<br>This course focuses on the integration of information systems in organizations, the process by which different computing systems and software applications are linked together physically or functionally. It examines the strategies and methods for blending a set of interdependent systems into a functioning or unified whole, thereby enabling two or more applications to interact and exchange data seamlessly. The course will explore tools and techniques for systems integration as well as proven management practices for integration projects. | | | | | |
| **5. Pre-requirements for this course (if any):** IS1503-Data and Information Management Or IS1502- Enterprise Resource Planning (ERP) | | | | | |
| **6. Co- requirements for this course (if any): None** | | | | | |
| **7. Course Main Objective(s)**<br>The main purpose of this course is to teach students how to define the objectives of and issues associated integration of information systems applications, explain alternative strategies for systems integration, identify commonly used tools for integrating information systems, describing the benefits of using each, explain how Web services can aid in systems integration, identifying the underlying tools and technologies that facilitate the creation of such services, explain the Integrated Software and Real-Time System Design with Applications, identify information systems application and organization characteristics that are most likely to cause an organization to employ a systems integration company to carry out the project work and interact in groups collaboratively. | | | | | |

## 1. Teaching mode (mark all that apply)

| No | Mode of Instruction | Contact Hours | Percentage |
|---|---|---|---|
| 1. | Traditional classroom | 30 | 100% |
| 2. | E-learning | | |
| 3. | Hybrid<br>• Traditional classroom<br>• E-learning | | |
| 4. | Distance learning | | |

## 2. Contact Hours (based on the academic semester)

| No | Activity | Contact Hours |
|---|---|---|
| 1. | Lectures | 30 |
| 2. | Laboratory/Studio | |
| 3. | Field | |
| 4. | Tutorial | |
| 5. | Others (specify) | |
| | Total | 30 |

# 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 | Define the objectives of and issues associated integration of information systems applications. | K1 | Lectures<br>Assignments | Quiz<br>Midterm<br>Final Exam |
| 1.2 | Explain alternative strategies for systems integration. | K2 | | Quiz<br>Midterm<br>Final Exam |
| 1.3 | Identify commonly used tools for integrating information systems, describing the benefits of using each. | K3 | | Midterm<br>Project<br>Final Exam |
| 2.0 | Skills | | | |
| 2.1 | Explain how Web services can aid in systems integration, identifying the underlying tools and technologies that facilitate the creation of such services. | S1 | Lectures<br>Assignments<br>Project | Quiz<br>Midterm<br>Project<br>Final Exam |
| 2.2 | Explain the Integrated Software and Real-Time System Design with Applications | S2 | | Quiz<br>Midterm<br>Final Exam<br>Project |
| 2.3 | Identify information systems application and organization characteristics that are most likely to cause an organization to employ a systems integration company to carry out the project work. | S3 | | Quiz<br>Midterm<br>Project<br>Final Exam |

| Code | Course Learning Outcomes | Code of CLOs aligned with program | Teaching Strategies | Assessment Methods |
|---|---|---|---|---|
| 3.0 | Values, autonomy, and responsibility | | | |
| 3.1 | Interact in groups collaboratively | V1 | Small Groups | Reports<br>Class Discussions<br>Project |

## C. Course Content

| No | List of Topics | Contact Hours |
|---|---|---|
| 1. | Overview of Systems Integration: challenges and drivers | 3 |
| 2. | Types of systems integration | 3 |
| 3. | Types of Application Integration: information-oriented Application | 6 |
| 4. | Integration | 3 |
| 5. | Systems integration technologies | 3 |
| 6. | Enterprise Resource Planning Systems and business process models | 3 |
| 7 | Integration methodologies | 3 |
| 8 | Designing systems integration solutions and Enterprise integration patterns | 3 |
| 9 | XML and Application Integration | 3 |
| Total | | 30 |

## D. Students Assessment Activities

| No | Assessment Activities * | Assessment timing (in week no) | Percentage of Total Assessment Score |
|---|---|---|---|
| 1. | Quiz | 6 | 10 % |
| 2. | Midterm | 5 | 20 % |
| 3. | Course Project presentation and report | 8 | 10 % |
| 4 | Final Exam | 13 | 60 % |

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

## E. Learning Resources and Facilities

### 1.References and Learning Resources

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|---|---|
| Essential References | • Luvai Motiwalla and Jeffrey Thompson Enterprise Systems for Management (2nd Edition) ISBN-10 : 0132145766, Pearson, 2019. |
| Supportive References | SKRIFVARS, Marcus. Cloud Migration to Azure Logic Apps: A Case Study Using the Cloudstep Decision Process. 2022. |
| Electronic Materials | • Access to the Saudi Digital Library (SDL).<br>• Using the learning management system of the university – Rafid System (https://lms.bu.edu.sa/). |

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|---|---|
| Other Learning Materials | |

## 2. Required Facilities and equipment

| Items | Resources |
|---|---|
| facilities<br>(Classrooms, laboratories, exhibition rooms, simulation rooms, etc.) | Every Class has more than 30 chairs for the students that is more enough for the registered students. |
| Technology equipment<br>(projector, smart board, software) | Every class room has smart board and projector with cables to connect to laptop for lectures. |
| Other equipment<br>(depending on the nature of the specialty) | Internet facility is available in classroom to show online programming examples and to run online compiler to execute the programs. |

# F. Assessment of Course Quality

| Assessment Areas/Issues | Assessor | Assessment Methods |
|---|---|---|
| Effectiveness of teaching | •Students<br>•Faculty<br>•Program Leader<br>•Course Coordinator | •Surveys (indirect).<br>•Direct feedback from students.<br>•Course evaluation by Peer Reviewers (indirect).<br>•Class visit by Program Leader (indirect)<br>Comprehensive Course report (where we can find information about teaching difficulties and action plan, …) |
| Effectiveness of students assessment | •Faculty<br>Course Coordinator | •Surveys (indirect).<br>•Course evaluation by Peer Reviewers (indirect). |
| Quality of learning resources | • Students<br>• Faculty<br>• Course Coordinator | • Surveys (indirect)<br>• Course evaluation by Peer Reviewers (indirect).<br>Comprehensive Course report (where we can find information about difficulties and challenges about learning resources as well as consequences and action plan..) |

| Assessment Areas/Issues | Assessor | Assessment Methods |
|---|---|---|
| The extent to which CLOs have been achieved | • Faculty<br>• Program Leader<br>• Course Coordinator | • Student Results (direct) Comprehensive Course report (where we can find the CLO assessment results) |
| Other | | |

**Assessor** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
**Assessment Methods**(Direct, Indirect)

## G. Specification Approval Data

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|---|---|
| COUNCIL /COMMITTEE | Curriculum Committee Meeting |
| REFERENCE NO. | |
| DATE | March 28, 2023 |