



# Course Specification

## (Bachelor)

Course Title: **Graduation Project**

Course Code: **APCS4214**

Program: **Programming and Computer Science Program**

Department: **Diploma**

College: **Applied College**

Institution: **Umm Al-Qura University**

Version: **1**

Last Revision Date: **Jan 2025**



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## A. General information about the course:

### 1. Course Identification

1. Credit hours: ( 3 hours )

#### 2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others  
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (4<sup>th</sup> level –2<sup>nd</sup> year )

#### 4. Course General Description

This course will demonstrate a student's ability to apply the knowledge and skills they've gained during their studies. It should involve solving a real-world problem, creating a useful application, or conducting research that contributes to the field.

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

Internet Applications, Database and Fundamentals of Programming in Artificial Intelligence

#### 6. Co-requisites for this course (if any):

N.A.

#### 7. Course Main Objective(s):

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

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



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

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

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

| Code | Course Learning Outcomes  | Code of PLOs aligned with the program | Teaching Strategies  | Assessment Methods   |
|------|---|---------------------------------------|--|--|
| 1.0  | Knowledge and understanding   |                                       |  |  |
| 1.1  | Identify recent concepts of modern computers and information technology                               | K1                                    | <ul style="list-style-type: none"><li>▪ Small group discussions.</li><li>▪ Brainstorming.</li><li>▪ Presentations.</li></ul> | <ul style="list-style-type: none"><li>▪ Written Report</li><li>▪ Developed/ Prototype of software solutions</li><li>▪ Presentation</li></ul> |
| 1.2  | Recall mathematical methods used in computer-related topics   | K2                                    |  |  |
| 1.3  | Recognize the principles of developing software solutions i.e., software, website, mobile application | K3                                    |  |  |
| 1.4  | Recognize computer architecture and hardware components   | K4                                    |  |  |
| 2.0  | Skills  |                                       |  |  |
| 2.1  | Construct documents, tables, presentations and simple database systems using Microsoft Office         | S1                                    | <ul style="list-style-type: none"><li>▪ Small group discussions.</li><li>▪ Brainstorming.</li><li>▪ Presentations.</li></ul> | <ul style="list-style-type: none"><li>▪ Written Report</li><li>▪ Developed/ Prototype of software solutions</li><li>▪ Presentation</li></ul> |
| 2.2  | Develop software solutions (e.g., software, website, mobile application)                              | S2                                    |  |  |

| Code       | Course Learning Outcomes  | Code of PLOs aligned with the program | Teaching Strategies  | Assessment Methods   |
|------------|---|---------------------------------------|--|--|
| 2.3        | Design software solutions based on a user-centered approach   | S3                                    |  |  |
| 2.4        | Build computer networks using suitable hardware and/or software components  | S4                                    |  |  |
| 2.5        | Publish a database using DB management system   | S5                                    |  |  |
| 2.6        | Deploy database in software solutions   | S6                                    |  |  |
| <b>3.0</b> | <b>Values, autonomy, and responsibility</b>   |                                       |  |  |
| 3.1        | Apply standards of integrity and ethical conduct in various academic, professional and research fields related to computer science.                       | V1                                    |  |  |
| 3.2        | Accept responsibility for keeping his/her knowledge and/or skills up to date by using self-learning to promote professional growth and lifelong learning. | V2                                    | <ul style="list-style-type: none"> <li>Small group discussions.</li> <li>Brainstorming.</li> <li>Presentations.</li> </ul> | <ul style="list-style-type: none"> <li>Written Report</li> <li>Developed/ Prototype of software solutions</li> <li>Presentation</li> </ul> |
| 3.3        | Function effectively in teamwork to accomplish a common goal, demonstrating leadership skills and effective cooperation                                   | V3                                    |  |  |

### C. Course Content

| No | List of Topics                | Contact Hours |           |
|----|-------------------------------|---------------|-----------|
|    |                               | Theoretical   | Practical |
| 1. | Project proposal              |               |           |
| 2. | Project outline and timeframe |               |           |
| 3. | Development follow-up         |               |           |





|              |   |  |  |
|--------------|---|--|--|
| 4.           | Final Project Report                          |  |  |
| 5.           | Presentations of main outcomes of the project |  |  |
| <b>Total</b> |   |  |  |

## D. Students Assessment Activities

| No | Assessment Activities *   | Assessment timing<br>(in week no) | Percentage of Total<br>Assessment Score |
|----|---|-----------------------------------|---|
| 1. | Defined and updated by the Graduation Committee in Programming and Computer Science in Applied College, UQU |                                   |   |
| 2. |   |                                   |   |
| 3. |   |                                   |   |
| 4. |   |                                   |   |

\*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     |  |
| Supportive References    |  |
| Electronic Materials     |  |
| Other Learning Materials | Instructor handouts and presentation in ppt. |

### 2. Required Facilities and equipment

| Items   | Resources   |
|---|---|
| <b>facilities</b><br>(Classrooms, laboratories, exhibition rooms, simulation rooms, etc.) | <ul style="list-style-type: none"> <li>Online meeting</li> </ul>  |
| <b>Technology equipment</b><br>(projector, smart board, software)                         | <ul style="list-style-type: none"> <li>Smart board</li> <li>Data show</li> <li>IDE software for Programming language</li> </ul>                 |
| <b>Other equipment</b><br>(depending on the nature of the specialty)                      | <ul style="list-style-type: none"> <li>Internet inside the classroom.</li> <li>Library: Up to date scientific books, in the library.</li> </ul> |

## F. Assessment of Course Quality

| Assessment Areas/Issues   | Assessor | Assessment Methods              |
|---------------------------|----------|---------------------------------|
| Effectiveness of teaching | Students | Questionnaire of course quality |





| Assessment Areas/Issues                     | Assessor   | Assessment Methods   |
|---|--|--|
| Effectiveness of Students assessment        | Peer reviewers                                     | -Random grading <b>report</b><br>-Test Completion <b>report</b> for test standards |
| Quality of learning resources               | Students   | <b>E-Survey</b> of sufficiency of learning resource                                |
| The extent to which CLOs have been achieved | Instructor, program leaders and Course coordinator | <b>Questionnaire</b> of course quality   |
| Other                                       |  |  |

**Assessors** (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify))

**Assessment Methods** (Direct, Indirect)

### G. Specification Approval

|                    |                                |
|--------------------|--------------------------------|
| COUNCIL /COMMITTEE | Umm Al-Qura University Council |
| REFERENCE NO.      | 851141114462/190365            |
| DATE               | 1446/11/22                     |

