# Course Specification

(Postgraduate)

| | |
|---|---|
| **Course Title:** | Research Project (1) |
| **Course Code:** | 501826-3 |
| **Program:** | Master in Artificial Intelligence |
| **Department:** | Computer Science |
| **College:** | College of Computers and Information Technology |
| **Institution:** | Taif University |
| **Version:** | V2 |
| **Last Revision Date:** | 5 May 2024 |

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## Table of Contents

# A. General information about the course:

## 1. Course Identification:

| 1. Credit hours: ( 3 ) | | | | |
|---|---|---|---|---|
| | | | | |
| **2. Course type** | | | | |
| **A.** | ☐University | ☐College | ☒ Department | ☐Track |
| **B.** | ☒ Required | | ☐Elective | |
| **3. Level/year at which this course is offered: ( Level 4 – Year 2)** | | | | |
| **4. Course general Description:** | | | | |
| This course provides students with the opportunity to apply the knowledge acquired during their studies. The students extend their academic experiments of leadership into areas of personal interest and demonstrate their ability to accomplish the project. The students demonstrate their ability to analyze, synthesize, design, and evaluate information. During the first semester, the student is required to complete the project proposal, project report and presentation as well as the software and/or hardware requirements. | | | | |
| **5. Pre-requirements for this course** (if any)**:** | | | | |
| This item is subject to the regulations governing postgraduate studies in Saudi universities and its executive rules at Taif University. | | | | |
| **6. Co-requirements for this course** (if any)**:** | | | | |
| None. | | | | |
| **7. Course Main Objective(s):** | | | | |
| The main objective of this course is to enable advanced graduate students in Artificial Intelligence and related fields to apply concepts and tools of the field to analyze and logically design real-world projects. | | | | |

## 2. Teaching Mode: (mark all that apply)

| No | Mode of Instruction | Contact Hours | Percentage |
|---|---|---|---|
| 1 | Traditional classroom | - | - |
| 2 | E-learning | - | - |
| 3 | Hybrid<br>• Traditional classroom<br>• E-learning | 45 | 100% |
| 4 | Distance learning | - | - |

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

| No | Activity | Contact Hours |
|---|---|---|
| 1. | **Lectures/Seminars** | **-** |

| | | |
|---|---|---|
| 2. | **Laboratory/Studio** | **-** |
| 3. | **Field** | **-** |
| 4. | **Tutorial** | **-** |
| 5. | **Others (specify): supervisor meetings** | **45** |
| | **Total** | **45** |

## 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** | | | |
| - | - | **-** | - | - |
| **2.0** | **Skills** | | | |
| 2.1 | Analyze problems and understand issues in relation to artificial intelligence. | **S1** | Discovery<br>Discussion<br>Brainstorming<br>Self-Learning<br>E-Learning | Proposal<br>Thesis report<br>Presentation<br>Seminars |
| 2.2 | Write a research proposal addressing issues in artificial intelligence. | **S1** | Discovery<br>Discussion<br>Brainstorming<br>Self-Learning<br>E-Learning | Proposal<br>Project report<br>Presentation<br>Seminars |
| 2.3 | Develop detailed design adhering to research methodology standards to solve an artificial intelligence problem. | **S2** | Discussion<br>Project<br>Self-Learning | Proposal<br>Project report |
| 2.4 | Choose appropriate artificial intelligence technologies to solve real-life problems | **S2** | Discussion<br>Project<br>Self-Learning | Proposal<br>Project report |
| **3.0** | Values, autonomy, and responsibility | | | |
| 3.1 | Incorporate professional, legal, and ethical standards in scientific research to contribute effectively to the field. | **V1** | Project<br>Self-Learning | Proposal<br>Project report |
| 3.2 | Recognize the need for lifelong learning due to ongoing technological advancements. | **V1** | Project<br>Self-Learning | Thesis report<br>Presentation<br>Seminars |

| Code | Course Learning Outcomes | Code of CLOs aligned with program | Teaching Strategies | Assessment Methods |
|---|---|---|---|---|
| 3.3 | Function efficiently as a researcher, participating in various professional activities like colloquiums, seminars, conferences, and competitions. | **V2** | Discussion<br>Project | Project defense<br>Presentation<br>Seminars |

## C. Course Content:

| No | List of Topics | Contact Hours |
|---|---|---|
| **1.** | Start-up meeting | 3 |
| **2.** | Project selection meeting(s) | 3 |
| **3.** | Submit Project Proposal | 12 |
| **4.** | Project work | 12 |
| **5.** | Submit Requirements/Specifications Report | 6 |
| **6.** | Submit final Report | 6 |
| **7.** | Project Presentation | 3 |
| **Total** | | **45** |

## D. Students Assessment Activities:

| No | Assessment Activities * | Assessment timing (in week no) | Percentage of Total Assessment Score |
|---|---|---|---|
| **1.** | Project Proposal | 6th week | 10 % |
| **2.** | Semester Overall Work | 15th week | 20% |
| **3.** | Final Report | 14th week | 30% (18% supervisor + 12% examiners) |
| **4.** | Project Presentation | 15th week | 40% (12% supervisor + 28% examiners) |

*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** | Literature Review from Scientific Databases. |
| **Supportive References** | - |
| **Electronic Materials** | - |
| **Other Learning Materials** | - |

## 2. Educational and Research Facilities and Equipment Required:

| Items | Resources |
|---|---|
| **facilities** (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.) | ▪ A meeting room with a personal computer, a data show. |
| **Technology equipment** (Projector, smart board, software) | ▪ Lab materials and required software.<br>▪ Video projector / data show<br>▪ White board. |
| **Other equipment** (Depending on the nature of the specialty) | - |

## F. Assessment of Course Quality:

| Assessment Areas/Issues | Assessor | Assessment Methods |
|---|---|---|
| **Effectiveness of teaching** | ▪ Students<br>▪ Coordinator | Indirect (Course exit survey)<br>Indirect (Feedback from Course Coordinator) |
| **Effectiveness of students assessment** | ▪ Faculty member<br>▪ Coordinator | Indirect (Feedback from Faculty member)<br>Indirect (Feedback from Course Coordinator) |
| **Quality of learning resources** | ▪ Students<br>▪ Faculty member<br>▪ Coordinator<br>▪ Council<br>▪ Curriculum Committees | Indirect (Course exit survey)<br>Indirect (Feedback from Faculty member)<br>Indirect (Feedback from Course Coordinator)<br>Indirect (Feedback from council)<br>Indirect (Feedback from Graduate Committees) |
| **The extent to which CLOs have been achieved** | ▪ Students<br>▪ Faculty member<br>▪ Coordinator<br>▪ Curriculum Committees | Indirect (Course exit survey)<br>Indirect (Feedback from Faculty member/ Course Coordinator/ Graduate Committee) |
| **Other** | - | - |

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

Assessment Methods (Direct, Indirect)

## G. Specification Approval Data:

| | |
|---|---|
| **COUNCIL /COMMITTEE** | **GRADUATE PROGRAMS COMMITTEE – CS DEPT.** |
| **REFERENCE NO.** | **V2** |
| **DATE** | **5/5/2024** |

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