Program Catalogue | 2023-2024 |

University of Mosul

Bachelor of Computer Science and Mathematics / Department of Artificial Intelligence

1. **Mission & Vision Statement**
2. **Program Specification**
3. **Program (Objectives) Goals**
4. **Program Student learning outcomes**
5. **Academic Staff**
6. **Grading and GPA**
7. **Modules**
8. **Contact**

1- Mission & Vision Statement

The Artificial Intelligence Department seeks to achieve leadership in education and scientific research through:

- **Providing innovative curricula that meet the needs of the modern era.**
- **Creating a learning environment that fosters innovation and creativity.**
- **Graduating distinguished students capable of keeping pace with technological advancements.**
- **Conducting advanced research that contributes to the development of artificial intelligence technologies.**
- **Collaborating with industrial and academic institutions to enhance students' practical experience.**

Mission

Regarding the **mission of the Artificial Intelligence Department** within the educational environment, it focuses on the **positive, economic, and environmental impact** graduates can have on society by applying AI technologies in various aspects of life. As for the **mission of the Artificial Intelligence Department** in the context of higher education and the job market, it encompasses the **benefits that graduates can achieve**.

These outcomes include the **skills and knowledge** students acquire during their studies in the department, as well as the **practical applications** they can implement in diverse fields, and the **development and innovation** that emerges from students after their graduation.

2- **Program Specification – Department of Artificial Intelligence**

Programme code:	BSc-	***ECTS***	240
Duration:	4 levels, 8 Semesters	***Method of Attendance:***	Full Time

The field of Artificial Intelligence (AI) represents a dynamic and rapidly evolving area within advanced technologies. By the end of the academic year, students will acquire foundational knowledge in AI concepts, including machine learning, deep learning, natural language processing, and computer vision. The program emphasizes specialized AI techniques and their integration with real-world applications to address challenges in various sectors such as healthcare, manufacturing, digital marketing, and information technology.

In **Level 1**, students are introduced to core principles of programming, mathematics, and computational thinking, forming a robust base suitable for progression in all subsequent modules. **Level 2** builds upon this foundation with program-specific subjects that prepare students for advanced, research-driven modules in **Levels 3 and 4**, focusing on intelligent systems design, data analysis, and ethical implications of AI deployment.

The program fosters a research-oriented mindset from the beginning, incorporating practical experience through lab sessions, project-based learning, research seminars, and integrated tutorials. Each academic level requires students to successfully complete assessments and submit approved project reports.

To ensure academic consistency and support, the same instructor serves as the personal tutor and academic advisor during Levels 1 and 2. These levels also include workshops aimed at developing key academic and professional skills such as data sourcing, presentation techniques, and collaborative problem-solving. Assignments including case studies, technical essays, and oral presentations enable students to apply their acquired skills in realistic and industry-relevant contexts.

Through this structured and progressive framework, the AI program aims to equip graduates with both theoretical insights and practical capabilities, empowering them to innovate, analyze complex problems, and contribute to the advancement of intelligent technologies across diverse sectors.

3- Program Objectives

The Artificial Intelligence Department's specialization aims to equip students with the fundamental knowledge and skills in developing and applying advanced AI technologies. This specialization strives to create job opportunities in both private and government sectors, including fields such as information technology, manufacturing industries, digital marketing, the medical sector, and many other entities seeking graduates from the Artificial Intelligence Department.

4- Student Learning Outcomes

1. Explain the fundamental principles of Artificial Intelligence, including machine learning algorithms, deep learning, natural language processing, and computer vision.
2. Acquire knowledge of recent advancements in Artificial Intelligence and their technological, economic, and societal impacts.
3. Analyze real-world and complex problems and propose intelligent solutions using appropriate AI techniques.
4. Design and develop intelligent models tailored to the needs of various sectors such as healthcare, industry, marketing, and education.
5. Engage in lifelong learning and self-development to keep pace with rapid advancements in the AI field.
6. Communicate effectively with both technical and non-technical audiences and present findings clearly and professionally.

5- Academic Staff

Mohammed Chachan Younis| Ph. D. in Artificial Intelligence| Assistant Professor
Email mohammed.c.y@uomosul.edu.iq
Mobile no. : +44 7478 878775

Safwan Omar Hasoon | Ph. D. in Artificial intelligence | Professor
Email : dr.safwan1971@uomosul.edu.iq
Mobile no. : +964 771 363 2307

Baydaa Sulaiman Bahnam| M.Sc. in Intelligent techniques | Assistant Professor
Email : baydaa_sulaiman@uomosul.edu.iq
Mobile no. : +964 770 663 6367

Alyaa Qusay Ahmed Taqi | Ph. D. in image processing and computer vision| Lecturer
Email : dr.alyaa@uomosul.edu.iq

Mobile no. : +964 770 177 2341

Ban Sharief Mustafa | Ph. D. in Artificial Intelligence | Lecturer
Email : banmustafa66@uomosul.edu.iq
Mobile no. : +964 770 288 8058

Hassan M.N.Alshhadani | Ph. D. in Pattern recognition | Lecturer
Email : hmn1973@uomosul.edu.iq
Mobile no. : +964 770 522 4073

Luma Akram Alharbawee | Ph. D. in Artificial Intelligence | Lecturer
Email : luma.akram@uomosul.edu.iq
Mobile no. : +964 771 608 2737

Zeena N. Al-kateeb | Ph. D. in Cloud of Things | Assistant Professor
Email : zeenaalkateeb@uomosul.edu.iq
Mobile no. : +964 770 386 6540

Zeyad Abd-Algfoor | Ph. D. in Artificial Intelligence | Lecturer
Email : drzeyad@uomosul.edu.iq
Mobile no. : +964 772 279 8145

Shrooq mohammed Azzo | M.Sc. in Numerical Analysis | Assistant Lecturer
Email : shrooq.mohammed@uomosul.edu.iq
Mobile no. : +964 751 133 8218

Saja Younis Hamid Al-HAMDANI | M.Sc. in Computer science | Assistant Lecturer
Email : sata@uomosul.edu.iq
Mobile no. : +964 751 592 5849

Noor Ammar Yasir | M.Sc. in artificial intelligent | Assistant Lecturer
Email : noor.ammar@uomosul.edu.iq
Mobile no. : +964 770 178 6321

sura abdulsattar abed | M.Sc. in Algebra | Assistant Lecturer
Email : sura.abdulsattar@uomosul.edu.iq
Mobile no. : +964 771 408 5764

6- Grading and GPA

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME			
Group	**Grade**	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	90 - 100	Outstanding Performance
	B - Very Good	80 - 89	Above average with some errors
	C - Good	70 - 79	Sound work with notable errors
	D - Satisfactory	60 - 69	Fair but with major shortcomings
	E - Sufficient	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	(45-49)	More work required but credit awarded
	F – Fail	(0-44)	Considerable amount of work required
Note:			
Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.			

Calculation of the Cumulative Grade Point Average (CGPA)

The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

CGPA = [(1st ^{m}odule score x ECTS) + (2nd ^{m}odule score x ECTS) + ……] / 240

7- Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOMAI105	Algorithms and Structured Programming (1)	93	107	8.00	C	
UOMAI107	Artificial Intelligence	63	87	6.00	C	
UOMAI102	Logic Design	63	87	6.00	C	
UOMAI106	Discrete Structures	48	27	3.00	C	
UOM1031	Computer	48	27	3.00	B	
UOM101	Arabic Language	33	17	2.00	B	
UOM1040	Democracy and Human Rights	33	17	2.00	B	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOMAI205	Algorithms and Structured Programming (2)	93	107	8.00	C	Algorithms and Structured Programming (1)
UOMAI203	Computer Organization	63	87	6.00	C	
UOM1021	English Language	33	17	2.00	B	
UOMAI206	Knowledge Representation	63	87	6.00	C	
UOMAI202	Mathematics for AI	63	37	4.00	S	
UOMAI204	Web Development	63	37	4.00	S	