Undergraduate Degree Program Catalogue | 2025-2026|
دليل البرنامج الدراسي

Al MUSTAQBAL UNIVERSITY
(جامعة المستقبل)

Bachelor of Science (B.Sc.) – Cyber Security Science

بكالوريوس علوم – علوم الامن السيبراني

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1. Mission & Vision Statement

Vision Statement

The vision of the Cybersecurity Department is manifested in academic and technical excellence. The department aims to equip students with deep knowledge and practical experience in the fields of information security and cybernetics. It seeks to connect this knowledge with the growing demands of the job market by offering educational programs that integrate advanced theories and modern technologies used in digital security. The department aims to graduate generations of experts possessing the necessary skills to address complex cybersecurity challenges in the modern job market. This contributes to securing institutions and protecting data and systems against the increasing and evolving threats on the internet.

A graduate of the Cyber Security Department works in the field of understanding and developing secure programs and secured systems, protecting data and storing it in a way that cannot be modified by any third party, and ensuring its reliability when transferring, maintaining and developing it. Ways to protect data and its stores from tampering and eavesdropping. A graduate of the Cyber Security Ddepartment has expertise in understanding and implementing the most important basic encryption methods and

algorithms, as well as in the ability to detect intruders on computer networks and ways to hide important digital information using texts, images, audio or digital video. The student is also prepared to keep pace with technological development and limit Cybercrimes, as well as absorbing and understanding legal, professional, technical and ethical responsibilities.

Mission Statement

- Applying strategies and technical skills to secure data and information protection
- Studying commitment to ethical behavior in the field of information security
- Applying the principles of scientific and systematic thinking to solve the problems and challenges of digital and cyber information security
- Mastering the skills necessary for the student to move to a stage specializing in computer and information security.

2. Program Specification

Programm code:	BSc-Science / Cyber Security Science	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

Computer science is a wonderfully wide-ranging subject. The emphasis of the program is the whole organism to which everything is related, the degree is popular - for some it's the breadth of the subject that appeals, for others it's a path to specialization. All students have the opportunity to transfer onto our specialist degrees in Cyber security, and programming at the end of the first year.

Level 1 exposes students to the fundamentals of computer, and computer security suitable for progression to all programs within the computer program group. Program-specific core topics are covered at Level 2 preparing for research-led subject specialist modules at Levels 3 and 4. A computer science graduate is therefore trained to appreciate how research informs teaching, according to the University and School Mission statements.

At Levels 2, 3 and 4 students are more than half of their specialist in the field of cyber security modules. This allows students to develop their own wide-ranging interests in computer field. Decisions on what to study are made with input from personal tutors.

Academic tutorials are held at Levels 1 and 2 with the same tutor, who is also the personal tutor, providing continuity and progressive guidance. Level 1 and 2 tutorials include a number of workshops to teach skills, e.g. library use and presentation skills, followed by assessed exercises, e.g. essays and talks, as opportunities to practice these skills in a subject-specific context.

3. Program Goals

1. To provide a comprehensive education in cyber security that stresses scientific reasoning and problem solving across the spectrum of disciplines within information and data security .
2. To prepare students for a wide variety of post-baccalaureate paths, including graduate school, professional training programs, or entry level jobs in any area of Cyber security.
3. To provide extensive hands-on training in electronic technology, statistical analysis, laboratory skills, and field techniques
4. To provide thorough training in written and oral communication of scientific information
5. To enrich students with opportunities for alternative education in the area of Computer security through undergraduate research, internships, and study-abroad

4. Student Learning Outcomes

The Student Learning Outcomes (SLOs) of the Cyber Security Science Department encompass a range of knowledge, skills, and competencies that students are expected to acquire during their academic journey. These outcomes reflect the department's goals in preparing students for success in the field of cyber security. Here are some common Student Learning Outcomes for a Cyber Security Science Department:

Outcome 1

Identification of Complex Relationships

Graduates will be able to understand, design, and develop software products, and to build structures for data storage and information transfer.

Outcome 2

Oral and Written Communication

Graduates will be able to understand problems and suggest solutions. Formally communicate the results of investigations using both oral and written communication skills. Satisfying the requirements by collecting data, executing algorithms, using computation methods, and programming.

Outcome 3

Laboratory and Field Studies

Graduates will be able to perform laboratory experiments and field studies, by using scientific equipment and computer technology while observing appropriate safety protocols.

Outcome 4

Scientific Knowledge

Graduates will be able to demonstrate a balanced concept of how scientific knowledge develops, including the historical development of foundational theories and laws and the nature of science.

Outcome 5

Data Analyses

Graduates will be able to demonstrate scientific quantitative skills, such as the ability to conduct simple data analyses.

Outcome 6

Critical Thinking

Graduates will be able to use critical-thinking and problem solving skills to develop a research project and/or paper.

5. Academic Staff

Dr. Ali Kadhum M. Al-Qurabat | Ph.D. in Information Technology - Software | Asst. Prof.

Email: ali.kadhum.mohammed@uomus.edu.iq

Mobile no.: 07802627087

Dr. Abdulkadhem A. Abdulkadhem | Ph.D. in Information Technology - Software | Lecturer.

Email: a.abdulkadhem@uomus.edu.iq

Mobile no.: 07814114023

Muntather Saheb Khalaf Al-mousawy | Msc. in **Computer Engineering** | Asst. Lecturer.

Email: muntather.saheb.khalaf@uomus.edu.iq

Suha Abdulhussein Abdulzahra | M.Sc. in Computer Science- Computer Networks | Asst. Lecturer.
Email: suha.abd@uomus.edu.iq

Mustafa Ameer Sabri Awadh | M.Sc. in Computer Engineering | Asst. Lecturer.
Email: mustafa.ameer.sabri@uomus.edu.iq

Firas Ahmed Hameed AL Shook| MA. in English Language | Asst. Lecturer.
Email: firas.ahmed.hameed@uomus.edu.iq

Noor Ali shaker| MA. in Law| Asst. Lecturer.
Email: noor.ali.shakir@uomus.edu.iq

Qusai Muneer Deyab AL-Durrah| Msc. in information technology-Software| Asst. Lecturer.
Email: qusai.muneer.deyab@uomus.edu.iq

6. Credits, Grading and GPA

Credits

Al-Mustaqbal University-Iraq is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 student workload, including structured and unstructured workload.

Grading

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 مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
NB 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 Grade Point Average (GPA)

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

   GPA of a 4-year B.Sc. degrees:

   GPA = [(1st module score x ECTS) + (2nd module score x ECTS) + ...] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MU0321101	Programming Fundamental	110	90	8.00		
MU0321102	Mathematics	93	57	6.00		
MU0321103	Statistics and Probability	93	57	6.00		
MU0321105	Cyber Security Principles	63	37	4.00		
MU0321104	Human rights & democracy	33	17	2.00		
MU0321106	English Languge	46.5	3.5	2.00		

Semester 2 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MU0321201	Structured Programming	110	90	8.00		
MU0321202	Discrete Structures	63	62	5.00		
MU0321203	Logic Design	95	55	6.00		
MU0321204	Coding Techniques	63	37	4.00		
MU0321205	Number Theory	80	45	5.00		
MU0321206	Arabic Languge	47	3	2.00		

Semester 3 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOMU033031	Object Oriented Programming	108	92	8.00	B	MU0321201
UOMU033032	Data Structures	78	47	5.00	B	
UOMU033033	Stream Cipher	93	57	6.00	C	MU0321204
UOMU033034	Numerical Analysis	78	47	5.00	B	MU0321205
UOMU033035	Authentication and Access Control	64	36	4.00	C	
UOMU000007	Baath Party Crimes	33	17	2.00	B	

Semester 4 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOMU033041	Database	108	92	8.00	B	
UOMU033042	Microprocessor	93	57	6.00	B	
UOMU033043	Sorting and Searching Algorithms	78	47	5.00	B	
UOMU033044	Block Cipher	78	47	5.00	C	
UOMU033045	Software Security	64	36	4.00	C	
UOMU00000	English Language	33	17	2.00	S	

Semester 5 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOMU033051	Computer Architecture	93	57	6.00	C	UOMU033042
UOMU033052	Computation Theory	78	47	5.00	C	UOMU033032
UOMU033053	Image Processing	93	57	6.00	C	
UOMU033054	Malicious Codes	63	62	5.00	C	
UOMU033055	Public Key Cryptography	93	57	6.00	C	UOMU033044
UOMU000007	English Language	33	17	2.00	B	

Semester 6 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOMU033061	Web Programming	93	82	7.00	C	
UOMU033062	Complier Design	93	57	6.00	C	UOMU033052
UOMU033063	Computer Networks	78	47	5.00	C	
UOMU033064	Artificial Intelligence Fundamentals	78	47	5.00	C	
UOMU033065	Cloud Computing Security	64	61	5.00	C	UOMU033045
UOMU00000	Arabic Language	33	17	2.00	B	

8. Contact

Program Manager:

Dr. Ali Kadhum M. Al-Qurabat | Ph.D. in Information Technology - Software | Asst. Prof.

Email: ali.kadhum.mohammed@uomus.edu.iq

Mobile no.: 07802627087

Program Coordinator:

Dr. Abdulkadhem A. Abdulkadhem | Ph.D. in Information Technology - Software | Lecturer.

Email: a.abdulkadhem@uomus.edu.iq

Mobile no.: 07814114023