MOSUL UNIVERSITY

Collage of Computer Science and Mathematics
Cyber Security Department

Study Guide - Bologna Path
2024 - 2025

IRAQ – MOSUL – AL-MAJMOAA AL-THAQAFIA

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1. Statement Vision and Mission

- Cybersecurity Department's vision:

Excellence and leadership in the educational, professional, and research fields of cybersecurity at the regional and global levels, and a commitment to effectively meeting the needs of society and the labor market.

- Cybersecurity Department Message::

Preparing professional cybersecurity cadres in both academic and professional fields capable of leading, designing, and developing various projects in various cybersecurity fields. This is achieved by providing a distinguished and high-quality program that focuses on integrating scientific theories and practical training to develop programs and applications, innovating in scientific research, providing the required security services to individuals and public and private institutions in Iraq, and contributing to community development.

2. Specification of the Program

The Department of Cybersecurity was established in 2022 within the College of Computer Science and Mathematics.

Program info.	**4 years**	**Duration**	**2 Levels**
ECTS	**240**	**Method of attendance**	**Full Time**

3. Goals of the Program

3.1. Providing students with the knowledge, skills, and behaviors necessary to analyze cybersecurity problems and design appropriate solutions using best practices. This will enable them to excel and innovate, qualifying them for the best positions in the job market.

3.2. The ability to innovate while adhering to professional, legal, and ethical frameworks and working effectively within multidisciplinary teams.

3.3. Enabling students to engage in continuous self-learning to further enhance their skills, learn about influential developments in the cybersecurity technology industry, and adopt new technologies and methods.

3.4. The ability to enroll in graduate programs in cybersecurity and other subjects.

4. Program Student Learning Outcomes

A compatible set of knowledge, skills, and values acquired by the student after successfully completing the academic program. The learning outcomes for each course must be determined in a way that achieves the program's objectives.

5. Staff Academic

No.	Name	Certificate	Academic title	General specialization	Sub specialization
1	Adi Hashim Saeed Abdul Razzaq Al-Watar	PhD	Assistant Professor	Computer Science	Information Security
2	Faris Adel Daoud	PhD	Lecturer	Computer Science	Operating Systems
3	Ahmed Sami Nouri	PhD	Assistant Professor	Computer Science	Information Security
4	Sufyan Salem Mahmoud	Ph.D.	Assistant Professor	Computer Science	Data Confidentiality
5	Karam Hatem Dhanoun	PhD	Assistant Professor	Computer Science	Cyber Security

6	Nadia Maan Mohammed	Ph.D.	Assistant Professor	Computer Science	Information Security and Confidentiality
7	Riyad Zaghloul Mahmoud	Ph.D.	Assistant Professor	Computer Science	Parallel Processors and Architecture
8	Ann Akram Gerges	PhD	Lecturer	Computer Science	Information Technology
9	Ibrahim Mohamed Ahmed	PhD	Lecturer	Computer Science	Network Security
10	Omar Abd Najm	Master	Assistant Lecturer	Computer Science	Computer Science
11	Sura Sabah Ibrahim	Master	Assistant Lecturer	Computer Science	Computer Science
12	Rahma Nizar Ibrahim	Master	Assistant Lecturer	Software	Software
13	Asmaa Mohamed Suleiman	Master	Assistant Lecturer	Mathematics	Mathematics
14	Muna Khalaf Omar	Master	Assistant Lecturer	Software	Software
15	Sundus Abdel Muttalib	Master	Lecturer	Computer Science	Computer Science
16	Zeyad Safaa Yonus	Master	Lecturer	Computer Science	Computer Science
17	Nawara Jassim Issa / Nomination	Master	Assistant Lecturer	Mathematics	Mathematics
18	Nehad Hussein Ismail	Master	Assistant Lecturer	Computer Science	Computer Science
19	Hisham Yasin Abaas	Master	Assistant Lecturer	Computer Engineering	Computer Engineering
20	Anfaal Mahmood Ahmed	Master	Assistant Lecturer	Computer Science	Computer Science

6. Credits, grades, and GPA

Credits University of Mosul/ Department of Cyber Security 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 hrs 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				
Group	**Grade**	**Grade**	**Marks (%)**	**Definition**
Success Group (50 – 100)	A- Excellent	Excellent	90 – 100	Outstanding Performance
	B- Very Good	Very Good	80 – 89	Above average with some errors
	C- Good	Good	70 – 79	Sound work with notable errors
	D- Satisfactory	Average	60 – 69	Fair but with major shortcomings
	E- Sufficient	Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX - Fail	Fail (in process)	(45 – 49)	More work required but credit awarded
	F- Fail	Fail	(0 – 44)	Considerable amount of work required
Note: Marks 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.				

7. Modules

Level one

Semester	No.	Module Code	Module Name in English	Language	SSWL hr/sem	USSWL hr/sem	SWL hr/sem	ECTS	Module Type	Prerequisite Module(s) Code
One	1	CYBS-101	Programming (1)	English	78	122	200	8.00	C	
	2	CYBS-102	Discrete Structures (1)	English	48	52	100	4.00	B	
	3	CYBS-103	Logic Design Fundamentals	English	63	87	150	6.00	C	
	4	CYBS-104	Information Security Principles	English	63	62	125	5.00	B	
	5	CYBS-105	Calculus	English	48	27	75	3.00	S	
	6	UOM1021	English Language (1)	English	32	18	50	2.00	S	
	7	UOM1040	Democracy and Human Rights	Arabic	32	18	50	2.00	S	
				Total	364	386	750	30.00		
Two	1	CYBS-107	Advanced Programming	English	78	97	175	7.00	C	CYBS-101
	2	CYBS-108	Computer Organization	English	78	72	150	6.00	C	
	3	CYBS-109	Cyber Security Fundamentals	English	63	62	125	5.00	B	
	4	CYBS-110	Discrete Structures (2)	English	48	52	100	4.00	B	CYBS-102
	5	CYBS-111	Probabilities & statistics	English	48	27	75	3.00	S	
	6	UOM1011	Arabic Language (1)	Arabic	32	18	50	2.00	S	
	7	UOM1031	Computer	English	48	18	75	3.00	S	
				Total	395	346	750	30.00		

Level Two

Semester	No.	Module Code	Module Name in English	Language	SSWL hr/sem	USSWL hr/sem	SWL hr/sem	ECTS	Module Type	Prerequisite Module(s) Code
Three	1	CYBS-201	Object-Oriented Programming (1)	English	78	122	200	8.00	C	
	2	CYBS-202	Data Structures	English	63	62	125	5.00	B	
	3	CYBS-203	Computational Theory	English	48	27	75	3.00	S	
	4	CYBS-204	Database Basics	English	63	37	100	4.00	B	
	5	CYBS-205	Cryptography (1)	English	78	122	200	8.00	C	
	6	UOM2022	English Language (2)	English	32	18	50	2.00	S	UOM1021
				Total	362	388	750	30.00		
Four	1	CYBS-207	Object-Oriented Programming (2)	English	78	97	175	7.00	C	CYBS-201
	2	CYBS-208	Cyber Security tools	English	48	77	125	5.00	C	
	3	CYBS-209	Distributed Databases	English	63	37	100	4.00	B	
	4	CYBS-210	Software Security	English	48	77	125	5.00	B	
	5	CYBS-211	Cryptography (2)	English	48	77	125	5.00	C	CYBS-205
	6	UOM2050	Ba'ath crimes in Iraq	Arabic	32	18	50	2.00	S	
	7	UOM2012	Arabic Language (2)	Arabic	32	18	50	2.00	S	UOM1011
				Total	317	401	750	30.00		

Level Three

Semester	No.	Module Code	Module Name in English	Language	SSWL hr/sem	USSWL hr/sem	SWL hr/sem	ECTS	Module Type	Prerequisite Module(s) Code
Five	1	CYBS-301	Coding and information Theory	English	48	102	150	6.00	C	
	2	CYBS-302	Cloud Computing principles	English	63	62	125	5.00	B	
	3	CYBS-303	Computer Networks	English	63	62	125	5.00	B	
	4	CYBS-304	Malicious Codes analysis	English	63	87	150	6.00	C	
	5	CYBS-305	Artificial Intelligence	English	63	37	100	4.00	B	
	6	CYBS-306	Computer Architecture	English	48	52	100	4.00	B	
				Total	348	402	750	30.00		
Six	1	CYBS-307	Compiler Design	English	63	62	125	5.00	C	
	2	CYBS-308	Network Security	English	63	62	125	5.00	C	
	3	CYBS-309	Database Security	English	48	77	125	5.00	C	
	4	CYBS-310	Awareness and Training for Security	English	48	77	125	5.00	C	
	5	CYBS-311	Secure Communication Protocols	English	48	77	125	5.00	C	
	6	CYBS-312	Ethical Hacking	English	63	62	125	5.00	C	
				Total	333	417	750	30.00		

Level Four

Semester	No.	Module Code	Module Name in English	Language	SSWL hr/sem	USSWL hr/sem	SWL hr/sem	ECTS	Module Type	Prerequisite Module(s) Code
Seven	1	CYBS-401	Operating Systems	English	63	62	125	5.00	C	
	2	CYBS-402	Internet of Things Security (IOT)	English	48	52	100	4.00	C	
	3	CYBS-403	Web applications Programming	English	63	62	125	5.00	C	
	4	CYBS-404	Electronic Governance Security	English	48	52	100	4.00	C	
	5	CYBS-405	Cloud Computing Security	English	63	62	125	5.00	C	
	6	CYBS-406	Project I	English	47	128	175	7.00	C	
				Total	332	418	750	30.0		
Eight	1	CYBS-407	Operating Systems Security	English	63	62	125	5.00	C	
	2	CYBS-408	Web applications Security	English	63	62	125	5.00	C	
	3	CYBS-409	Digital Forensics	English	63	62	125	5.00	C	
	4	CYBS-410	Intelligent Analysis of Security Threats	English	48	52	100	4.00	C	
	5	CYBS-411	Information Risk Management	English	48	52	100	4.00	C	
	6	CYBS-412	Project II	English	47	128	175	7.00	C	CYBS-406
				Total	332	418	750	30.0		

8. Contact

Head of Cyber Security Department

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