جـامعة الـزيتـونـة الأردنيـة
Al-Zaytoonah University of Jordan
كلية العلوم وتكنولوجيا المعلومات
Faculty of Science and information Technology

" عراقة وجودة"
"Tradition and Quality"

نموذج الخطة الدراسية لبرنامج البكالوريوس – إجراءات إعداد الخطة الدراسية وتحديثها/ تكنولوجيا المعلومات	QF01/0407-3.0

Study Plan for Information Technology Specialization / Cybersecurity (Bachelor Program) No 2020-2021

Approved by Deans Council by Decision (   ) Dated (   )

(133) Credit Hours

No	Goals and Learning Outcomes
G 1	Apply security principles to preserve information in the presence of constant threats and provide appropriate solutions through the optimal use of available resources.
To be able to:	
L.O 1.1	Use supportive technologies and tools to find appropriate software solutions.
L.O 1.2	Apply computing and math concepts in cybersecurity.
L.O 1.3	Use modern technologies in the field of cybersecurity.
G 2	Motivate and support students to learn, excel in scientific research and practical applications in the field of cybersecurity.
To be able to:	
L.O 2.1	Analyze problems and find secure and appropriate software solutions using the advance tools in analysis, design and evaluation.
L.O 2.2	The application of scientific research methodology to solve security problems of information.
L.O 2.3	Self-development in continuous learning.
G 3	Develop productive, professional and ethical skills of cybersecurity students and enable them to work as a team.
To be able to:	
L.O 3.1	Understand professional, ethical, legal, security, and social responsibilities.
L.O 3.2	Use communication skills and communicate with others and the ability to work as a harmonious team.
L.O 3.3	Develop cybersecurity systems and technologies to suit the requirements of the labor market.
G 4	Develop educational plans in the field of cybersecurity to keep up with the needs of society within the standards of accreditation and quality.
To be able to:	
L.O 4.1	Keep up with the latest developments in cybersecurity to meet the needs of the local and regional labor market.
L.O 4.2	Design and develop of all types of information security systems (encryption systems, network monitoring and protection systems, e-commerce systems, intrusion detection systems, etc.)
L.O 4.3	Build, develop and protect software applications, web pages and software packages.
L.O 4.4	Qualifying the student to be able and qualified to work in the field of cybersecurity engineering.

Note: G = Goal, L.O = Learning Outcome

Determine 3-7 learning outcomes pre each goal

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First: University Requirements (27) Credit Hours

Student's Information		Course Number	Course Title	Credit hours	Theory hours	Practical hours	Prerequisite	Directive Plan
Passed	Registered							Semester/year
First: University Requirements (27) Credit Hours								
A. Mandatory Requirement (15 Credit Hours)								
☐	☐	0420101	Military Sciences	3	3	0	…………….	1/2
☐	☐	0420111	Arabic Language (1)	3	3	0	Remedial Arabic Language	1/1
☐	☐	0420121	English Language (1)	3	3	0	Remedial English Language	1/2
☐	☐	0420151	National Education	3	3	0	…………….	1/1
☐	☐	0420171	Life Skills	3	3	0	…………….	1/1
B. Electives (12) Credit Hours, Minimum (3 Credits From Each Field)								
Field I. Humanitarian Courses								
☐	☐	0420103	History of Jerusalem	3	3	0	…………….	1/2
☐	☐	0420112	Islamic Culture	3	3	0	…………….	2/2
☐	☐	0420131	Principles of Education	3	3	0	…………….	1/2
☐	☐	0420134	Sport and Health	3	2	2	…………….	2/2
☐	☐	0420142	Human Civilization	3	3	0	…………….	1/2
☐	☐	0420152	Introduction to Sociology	3	3	0	…………….	2/2
☐	☐	0501100	Innovation and Entrepreneurship in Business	3	3	0	…………….	2/2
☐	☐	0601102	Law in Our Life	3	3	0	…………….	1/2
Field II. Scientific Course								
☐	☐	0120111	Information Technology and Society	3	3	0	…………….	1/2
☐	☐	0120153	Medicinal Plants	3	3	0	…………….	1/2
☐	☐	0301101	First Aid	3	3	0	…………….	1/2
☐	☐	0301102	Fundamental of Nutrition	3	3	0	…………….	2/2
☐	☐	0906100	Principles of energy science	3	3	0	…………….	2/2

Student's Information		Course Number	Course Title	Credit hours	Theory hours	Practical hours	Prerequisite	Directive Plan
Passed	Passed							Semester/year
Second: Faculty Requirements (21) Credit Hours								
☐	☐	0113130	Introduction to Information Technology	3	3	0	*Remedial Computer Skills	1/1
☐	☐	0101110	Principles of Mathematics and Statistics	3	3	0	…………….	1/1
☐	☐	0112120	Principles of Programming	3	2	2	Introduction to Information Technology	1/2
☐	☐	0112130	Professional Skills for Scientific Faculties	3	3	0	…………….	1/2
☐	☐	0112110	Discrete Mathematics	3	3	0	…………….	1/1
☐	☐	0112220	Object Oriented Programming	3	3	2	Principles of Programming	2/1
☐	☐	0113220	Web Design	3	2	2	Principles of Programming	2/2
Third: Major Requirements (82) Credit Hours								
A. Mandatory Major Requirements (33) Credit Hours								
☐	☐	0112231	Digital Logic Design	3	3	0	Discrete Mathematics	1/2
☐	☐	0115135	Computer Networks and Data Transmission	3	3	0	Introduction to Information Technology	1/2
☐	☐	0115234	Information Security and	3	3	0	Introduction to Information	1/2

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☐	☐		Cybersecurity				Technology	
☐	☐	0113241	Database	3	2	2	Object Oriented Programming	2/2
☐	☐	0115212	Data Structure and Algorithms	3	3	0	Object Oriented Programming	2/2
☐	☐	0112222	Visual Programming	3	2	2	Object Oriented Programming	2/2
☐	☐	0115333	Secure System Analysis and Design	3	2	2	Database	3/1
☐	☐	0115332	Database Management Systems and Security	3	2	2	Database	3/1
☐	☐	0113324	Internet Applications Programming	3	2	2	Web Design	3/1
☐	☐	0112424	Mobile Apps Development	3	2	2	Object Oriented Programming	3/2
☐	☐	0115436	Information Hiding Techniques	3	2	2	Information Security Protocols	4/1

B. Mandatory Minor Requirements (34) Credit Hours

☐	☐	0125247	Networks Operating Systems	3	2	2	Computer Networks and Data Transmission	2/1
☐	☐	0125244	Cryptography	3	3	0	Information Security and Cybersecurity	2/1
☐	☐	0125248	Ethical Hacking in Cybersecurity	3	2	2	Cryptography	2/2
☐	☐	0125349	Digital Forensics	3	2	2	Cryptography	3/1
☐	☐	0125342	E-commerce Security and Cyber Crimes	3	3	0	Ethical Hacking in Cybersecurity	3/2
☐	☐	0125345	Information Security Protocols	3	3	0	Ethical Hacking in Cybersecurity	3/2
☐	☐	0125336	Risk Management and Evaluation	3	3	0	Secure System Analysis and Design	3/2
☐	☐	0125441	Wireless and Wired Network Security	3	2	2	Information Security Protocols	4/1
☐	☐	0125443	Network Monitoring and Documentation	3	2	2	Information Security Protocols	4/1
☐	☐	0125481	Practical Training	3	0	0	Department Approval	4/1
☐	☐	0125471	Methodology for Building A Secure System	1	0	2	Department Approval	4/2
☐	☐	0125472	Graduation Project	3	0	0	Department Approval	4/2

C. Major Supporting Requirements (6) Credit Hours

☐	☐	0101221	Linear Algebra (1)	3	3	0	Principles of Mathematics and Statistics	2/1
☐	☐	0101272	Numerical Analysis (1)	3	3	0	Principles of Mathematics and Statistics	3/2

D. Major Electives (9) Credit Hours

☐	☐	0125371	Cybersecurity Tools and Techniques	3	2	2	Introduction to Information Technology	3/1
☐	☐	0125361	Malicious Software (Malware)	3	2	2	Computer Networks and Data Transmission	3/2
☐	☐	0125362	Selected Topics in Cybersecurity	3	2	2	Department Approval	3/2
☐	☐	0125325	Python for Cybersecurity	3	2	2	Internet Applications Programming	3/2
☐	☐	0125463	Artificial Intelligence in Cybersecurity	3	3	0	Database Management Systems and Security	4/1
☐	☐	0125464	Access Control and Authentication	3	2	2	Secure System Analysis and Design	4/1
☐	☐	0125465	Cloud Computing Security	3	3	0	Wireless and Wired Network Security	4/2
☐	☐	0125466	Integrated Penetration Protection Technologies	3	3	0	Wireless and Wired Network Security	4/2
☐	☐	0125467	Operating Systems' Security	3	3	0	Cloud Computing Security	4/2

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Fourth: Free Electives (3) Credit Hours
Student may choose any course from any course plan at the university unless the student had passed it previously

Courses taught by the specialization for the students of other specializations (University Requirements, College Requirements, Support Requirements)

Course No.	Course Name	Credit Hours	Type of Requirement (University Requirement, College Requirement, Supporting Requirements)