جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية العلوم وتكنولوجيا المعلومات
Faculty of Science and Information Technology

" عراقة وجودة"
"Tradition and Quality"

QF01/0413-4.0E	Study Plan for Master program - Study Plan Development and Updating Procedures/ Mathematics Department

Course Plan for Mathematics (Master Program) No.: (2021/2022)		
Approved by Deans Council by decision (14/20/2020-2021) dated (12/8/2021)		
(33) Credit Hours		Study system / hybrid program
Type of specialty	☐ Humanitarian	✓ **Scientific / technical** ☐ Medical Sciences

Teaching style	Percentage of study plan hours / number	Model used (synchronous: asynchronous)
Complete e-learning courses	18% / number (6) Credit Hours	1:1
Blended Learning courses (For Humanity)	45% / number (15) Credit Hours	1:1
Blended learning courses (for scientific and medical)	45% / number (15) Credit Hours	1:1
Traditional learning courses (for humanity)	37% / number (12) Credit Hours	3:0
Traditional learning courses (for scientific and medical)	37% / number (12) Credit Hours	3:0

Important note: (The teaching patterns of the subjects are distributed at all academic levels in the program, and the Thesis hours are taught in a blended learning mode).

Program vision: Building competencies specialized in the field of mathematics, equipped with the knowledge, skills and leadership, creative and pioneering competencies necessary to compete in the global labor market, through the creative application in the use of information technology and modern teaching and learning strategies.

Program mission and objectives:
1. Enriching students with advanced mathematics principles and concepts.
2. Enable students to analyze and apply in the various fields of mathematics.
3. Formation of the student's scientific and intellectual personality, so that he can contribute to the service and development of society.
4. Preparing the distinguished graduate who possesses the skills of thinking and scientific research to pursue studies at the postgraduate level in the field of work after graduating.

Program learning outcomes ((MK= Main Knowledge, MS= Main Skills, MC= Main Competences)

Main knowledge	
MK1	Know advanced concepts in pure mathematics.
MK2	Know advanced concepts in applied mathematics.
MK3	Understand concepts, advanced principles, and theories in the fields of probability and statistics.
MK4	Have the technological culture related to the fields of mathematics and its applications.
Basic skills	
MS1	Employing pure and applied mathematics in solving scientific problems.
MS2	The ability to research and write scientific reports.
MS3	Consolidating the scientific methodology as a way of thinking and a tool in facing public problems.
General competencies	
MC1	Work professionally and ethically within work teams by having communication mechanisms.
MC2	Have logical thinking and scientific research methods.

1. Master thesis program (33) credit hours:

Teaching style			Course No.	Course name	Credit hour	Indicative		Notes
Fully electronic learning	Blended learning	Traditional learning				Semester	year	
1. Mandatory requirements (18) credit hours								
		*	0101711	Real Analysis	3	1	1	
		*	0101721	Abstract Algebra (1)	3	1	1	
		*	0101731	Topology (1)	3	2	1	
	*		0101741	Applied Mathematics (1)	3	2	1	
	*		0101751	Mathematical Statistics	3	1	2	
*			0101772	Scientific Research Methodology	3	2	2	
	*		0101712	Functional Analysis	3	1	1	
		*	0101713	Complex Analysis	3	1	1	
		*	0101714	Mathematical Optimization	3	2	1	
	*		0101722	Abstract Algebra (2)	3	2	1	
*			0101771	Selected Topics in Mathematics	3	1	2	
	*		0101732	Topology (2)	3	1	2	
	*		0101742	Applied Mathematics (2)	3	2	2	
		*	0101752	Probability Theory	3	2	2	
	*		0101743	Advanced Numerical Analysis	3	1	1	
2. Thesis (9) Credit Hours								

2. Comprehensive exam program (33) credit hours:

Teaching style			Course No.	Course name	Credit hour	Indicative		Notes
Fully electronic learning	Blended learning	Traditional learning				Semester	year	
1. Mandatory requirements (18) credit hours								
		*	0101711	Real Analysis	3	1	1	
		*	0101721	Abstract Algebra (1)	3	1	1	
		*	0101731	Topology (1)	3	2	1	
	*		0101741	Applied Mathematics (1)	3	2	1	
	*		0101751	Mathematical Statistics	3	1	2	
	*		0101711	Advanced Numerical Analysis	3	1	2	
*			0101771	Selected Topics in Mathematics	3	2	2	
*			0101772	Scientific Research Methodology	3	2	2	
	*		0101791	Research Project	3	2	2	
2. electives requirements (6) credit hours								
	*		0101712	Functional Analysis	3	1	1	
		*	0101713	Complex Analysis	3	1	1	
		*	0101714	Mathematical Optimization	3	2	1	
		*	0101722	Abstract Algebra (2)	3	2	1	
		*	0101732	Topology (2)	3	1	2	
	*		0101742	Applied Mathematics (2)	3	2	2	
		*	0101752	Probability Theory	3	2	2	
3. Comprehensive exam (0) Credit Hours								