



**Zarqa University**  
**Curriculum / Study Plan for**  
**Master Degree in Mathematics**  
**PROGRAM Mathematics / Comprehensive Exam Track**

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**Faculty Of Science and Information Technology / Department of Mathematics**

**GENERAL RULES AND CONDITIONS:**

The study plan consists of (33) credit hours as follows:

**I. Compulsory Courses:** (24) credit hours as follows:

Course no.	Course title	Cr. Hrs.	Pre-requisite
1309701	Theory of ordinary differential equations	3	
1309711	Real analysis (measure theory and integration)	3	
1309712	Complex analysis	3	
1309731	Mathematical statistics	3	
1309732	Probability theory	3	
1309741	Modern algebra 1	3	
1309761	General topology 1	3	
1309771	Methods of applied mathematics 1	3	

**II. Elective courses:** (9) credit hours to be chosen from one of the following concentration Areas:

Course no.	Course title	Cr. Hrs.	Pre-requisite
1309702	Partial differential equations	3	
1309705	Dynamical systems	3	1309761
1309713	Functional analysis	3	1309711
1309733	Stochastic processes	3	
1309734	Linear statistical models	3	
1309735	Nonparametric statistics	3	
1309742	Modern algebra 2	3	1409741
1309743	Advanced matrix theory	3	
1309744	Analytic number theory	3	
1309762	Topology 2	3	1309761
1309763	Graph theory	3	
1309764	Algebraic topology	3	1309761
1309772	Advanced numerical analysis	3	
1309773	Methods of applied mathematics 2	3	1309771
1309781	Selected topics in pure mathematics	3	
1309782	Selected topics in applied mathematics	3	
1309783	Selected topics in statistics	3	

**III. Comprehensive Exam:**

Course no.	Course title	Cr. Hrs.	Pre-requisite
1309798	Comprehensive Exam	0	

**Codes of knowledge fields:** 0-Differentiation, Integration and equations    1- Real analysis    3-Statistics and Probability    4-Algebra    5- Foundations of Mathematics  
 6- Topology and Geometry    7- Methods of Solution    8- Special Topics    9 Thesis or Exams