



كلية العلوم
Faculty of Science

**Proposed Study Plan for the
Bachelor Degree in
Mathematics
(B.Sc. Mathematics)
132 credit hours**

Study Plan for the Bachelor Degree in Mathematics

B.Sc. Mathematics

132 credit hours

Requirements for the B.Sc. Degree in Mathematics

All students working for their Bachelor's Degree in Mathematics (B.Sc. Mathematics) must successfully complete 132 credit hours distributed as follows:

Requirements		Credit Hours
University Requirements	Compulsory Courses	15
Faculty Requirements	Compulsory Courses	29
Departments Requirements	Compulsory Courses	76
	Elective Courses	12
Total Credit Hours		132

Chairman of the Department
Prof. Mohamed Alswalha

Head of Academic Committee
Prof. Adel Attiya

Study Plan for B.Sc. Mathematics

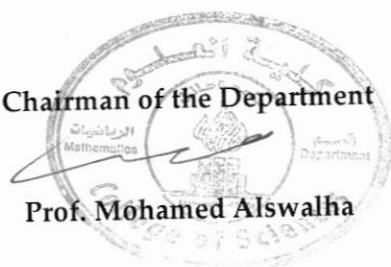
FIRST YEAR

FIRST TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 110	Pre-Calculus	2	3	0
ARAB 100	Arabic Language Skills	2	3	0
IC 111	Islamic Culture	2	3	0
ENGL 100	English Language	2	3	0
CRC L115	University Life Skills	3	4	0
TOTAL		11	16	0

SECOND TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
BIOL 101	General Biology	4	4	3
CHEM 100	General Chemistry I	4	4	3
ENGL 107	English for Science	3	4	0
TOTAL		11	12	7

THIRD TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
PHYS 112	General Physics I	4	4	4
MATH 111	Calculus 1	4	6	0
ENG 1004	Pre-intermediate English	4	6	0
TOTAL		12	16	4

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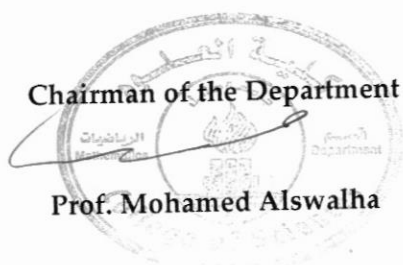
Study Plan for B.Sc. Mathematics SECOND YEAR

FIRST TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
ETEC115	Computer and information	2	3	0
EDUC 115	Work Values and Ethics	2	3	0
ENG 1005	Intermediate English	4	6	0
MATH 211	Foundation of Mathematics	4	6	0
TOTAL		12	18	0

SECOND TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
EDUC 125	Entrepreneurship	2	3	0
MATH 212	Calculus II	4	6	0
ICS 103	Computer Programming	3	3	4
MATH 213	Linear Algebra I	3	4	0
TOTAL		12	16	4

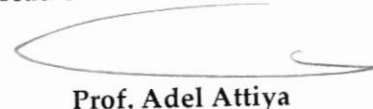
THIRD TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 221	Advanced Calculus I	3	4	0
MATH 222	Real Analysis I	3	4	0
MATH 223	Geometry	3	4	0
MATH 225	Introduction to Number Theory	3	4	0
TOTAL		12	16	0

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Study Plan for B.Sc. Mathematics THIRD YEAR

FIRST TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 229	Introduction to Probability	3	4	0
MATH 311	Mathematical Software and Programming	2	2	2
MATH 312	Advanced Calculus II	3	4	0
MATH 313	Abstract Algebra I	3	4	0
TOTAL		11	14	2

SECOND TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 314	Elementary Differential Equations	3	4	0
MATH 316	Topology	3	4	0
MATH 318	Statistics I	3	4	0
TOTAL		9	12	0

THIRD TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 322	Real Analysis II	3	4	0
MATH 327	Complex Analysis I	3	4	0
MATH 323	Numerical Analysis I	3	4	0
TOTAL		9	12	0

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Study Plan for B.Sc. Mathematics FOURTH YEAR

FIRST TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 326	Methods of Applied Mathematics	3	4	0
MATH 333	Introduction to Graph Theory	3	4	0
MATH 411	Abstract Algebra II	3	4	0
MATH 413	Statistics II	3	4	0
TOTAL		12	16	0

SECOND TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 422	Partial Differential Equations	3	4	0
MATH xxx	MATH Elective II	3	4	0
MATH xxx	MATH Elective V	3	4	0
MATH 421	Functional Analysis	3	4	0
TOTAL		12	16	0

THIRD TRIMESTER				
CODE	COURSE TITLE	Cr.	Lect.	Lab.
MATH 423	Research Project	3	0	9
MATH xxx	MATH Elective IV	3	4	0
MATH xxx	MATH Elective III	3	4	0
TOTAL		9	8	9

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UNIVERSITY COMPULSORY COURSES (15 hours)					
CODE	COURSE TITLE	Cr.	Lect.	Lab.	PRE-REQUISITE
ARAB 100	Arabic Language Skills	2	3	0	-
IC 111	Islamic Culture	2	3	0	-
EDUC 115	Work Values and Ethics	2	3	0	-
EDUC 125	Entrepreneurship	2	3	0	-
CRCL 115	University Life Skills	3	4	0	-
ENGL 100	English Language	2	3	0	-
ETEC 115	Computer and information	2	3	0	-
TOTAL		15	22	0	

FACULTY COMPULSORY COURSES (29 hours)					
CODE	COURSE TITLE	Cr.	Lect.	Lab.	PRE-REQUISITE
CHEM 100	General Chemistry I	4	4	4	-
BIOL 101	General Biology	4	4	3	-
MATH 110	Pre-calculus	2	3	0	-
MATH 111	Calculus I	4	6	0	MATH 110
PHYS 112	General Physics I	4	4	4	*CO-MATH 111
ENGL 107	Scientific English	3	4	0	-
ENG 1004	Pre-Intermediate English	4	6	0	-
ENG 1005	Intermediate English	4	6	0	-
TOTAL		29	37	11	

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COMPULSORY COURSES FOR MATHEMATICS PROGRAM (76 hours)					
CODE	COURSE TITLE	Cr.	Lect.	Lab.	PRE-REQUISITE
MATH 211	Foundations of Mathematics	4	6	0	
ICS 103	Computer Programming	3	3	4	*CO-MATH 111
MATH 212	Calculus II	4	6	0	MATH 111
MATH 213	Linear Algebra I	3	4	0	MATH 111
MATH 221	Advanced Calculus I	3	4	0	MATH 212 & CHEM 100
MATH 222	Real Analysis I	3	4	0	MATH 211
MATH 223	Geometry	3	4	0	CO-MATH 211 & PHYS 112
MATH 225	Introduction to Number Theory	3	4	0	MATH 211
MATH 229	Introduction to Probability	3	4	0	CO-MATH 212
MATH 311	Mathematical Software and Programming	2	2	2	CO-MATH 213
MATH 312	Advanced Calculus II	3	4	0	MATH 221
MATH 313	Abstract Algebra I	3	4	0	MATH 225
MATH 314	Elementary Differential Equations	3	4	0	BIOL 101 & CO-MATH 221
MATH 316	Topology	3	4	0	MATH 222
MATH 318	Statistics I	3	4	0	MATH 229
MATH 322	Real Analysis II	3	4	0	MATH 222
MATH 323	Numerical Analysis I	3	4	0	MATH 311 & CO-MATH 314
MATH 326	Methods of Applied Mathematics	3	4	0	MATH 314
MATH 327	Complex Analysis I	3	4	0	MATH 221 & MATH 222
MATH 333	Introduction to Graph Theory	3	4	0	MATH 211
MATH 411	Abstract Algebra II	3	4	0	MATH 313
Math 413	Statistics II	3	4	0	MATH 318
MATH 421	Functional Analysis	3	4	0	MATH 316 & MATH 322
MATH 422	Partial Differential Equations	3	4	0	MATH 312 & MATH 314
MATH 423	Research Project	3	0	8	100 Earned Credit Hours
TOTAL		76	97	14	

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ELECTIVE COURSES FOR MATHEMATICS PROGRAM (12 hours)					
CODE	COURSE TITLE	Cr.	Lect.	Lab.	PRE-REQUISITE
MATH 412	Numerical Analysis II	3	4	0	MATH 412
MATH 430	Measure theory	3	4	0	MATH 322
MATH 431	Differential Geometry	3	4	0	MATH 312
MATH 434	Difference Equations	3	4	0	MATH 221
MATH 435	Ordinary Differential Equations	3	4	0	MATH 326
MATH 436	Integral Equations	3	4	0	MATH 326
MATH 437	Linear Algebra II	3	4	0	MATH 213
MATH 438	Set Theory	3	4	0	MATH 211
MATH 439	Combinatorics	3	4	0	MATH 333
MATH 440	Introduction to Cryptograph	3	4	0	MATH 225
MATH 441	Applied Mathematics	3	4	0	MATH 221
MATH 442	Linear & Non-Linear Programming	3	4	0	MATH 316
MATH 446	Dynamical Systems and chaos	3	4	0	MATH 312
MATH 447	History of Mathematics	3	4	0	MATH 111
MATH 448	Mathematical Modeling and Simulation	3	4	0	MATH 326
MATH 449	Financial Mathematics	3	4	0	MATH 312
MATH 450	Probability Theory	3	4	0	MATH 318
MATH 451	Complex Analysis II	3	4	0	MATH 327
MATH 452	Topics in Mathematics	3	4	0	MATH xxxx

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