BS SCHEME OF STUDIES MATHEMATICS

DEPARTMENT OF MATHEMATICS

GCWUF

2018

Govt. College Women University Faisalabad
Department of Mathematics

Scheme of Studies BS Mathematics Four Years Degree Program
2018

Semester I

Course Code	Title of the Course	Credit Hours
Major Course		

MTH-301	Calculus I	4(4-0)
MTH-303	Elements of Set Theory and Mathematical Logic	3(3-0)
Minor Course		
ENG-321	English-I – Language in Use	3(3-0)
ICT-321	Introduction to Computer	3(2-1)
PST-321	Pakistan Studies	2(2-0)
PHY-301	Mechanics I	3(3-0)
Total		**18(17-1)**

Semester II

Course Code	Title of the Course	Credit Hours
Major Course		
MTH-302	Calculus II	4(4-0)
MTH-304	Software Packages	3(1-2)
Minor Course		
ENG-322	English II – Academic Reading and Writing	3(3-0)
ICT-322	Introduction to Programming	3(3-0)
ISL-408	Islamic Studies	2(2-0)
PHY-304	Mechanics II	3(3-0)
Total		**18(15-2)**

Semester III

Course Code	Title of the Course	Credit Hours
Major Course		
MTH-401	Calculus III	4(4-0)
MTH-403	Discrete Mathematics	3(3-0)
ECO-301	Principles of Micro Economics	3(3-0)
STA-320	Introduction to Statistical Theory	3(3-0)
ENG-421	English III – Communications Skills	3(3-0)
Total		**16(16-0)**

Semester IV

Course Code	Title of the Course	Credit Hours
Major Course		
MTH-402	Affine and Euclidean Geometry	4(4-0)
MTH-404	Linear Algebra	4(4-0)
MTH-406	Ordinary Differential Equations	3(3-0)
Minor Course		

ECO-302	Principles of Macro Economics	3(3-0)
ARB-308	Arabic	3(3-0)
CHM-300	Environmental Sciences	1(1-0)
Total		**18(18-0)**

Semester V

Course Code	Title of the Course	Credit Hours
Major Course		
MTH-501	Topology	3(3-0)
MTH-503	Differential Geometry	3(3-0)
MTH-505	Real Analysis I	4(4-0)
MTH-507	Algebra I	4(4-0)
MTH-509	Vector and Tensor Analysis	3(3-0)
Total		**17(17-0)**

Semester VI

Course Code	Title of the Course	Credit Hours
Major Course		
MTH-502	Partial Differential Equations	3(3-0)
MTH-504	Classical Mechanics	3(3-0)
MTH-506	Complex Analysis	3(3-0)
MTH-508	Real Analysis II	3(3-0)
MTH-510	Functional Analysis	3(3-0)
MTH-512	Algebra II	3(3-0)
Total		**18(18-0)**

Semester VII

Course Code	Title of the Course	Credit Hours
Major Course		
MTH-601	Numerical Analysis I	4(4-0)
MTH-603	Number Theory	4(4-0)
MTH-605	Mathematical Methods	3(3-0)
Elective Courses (2 courses out of following)		
MTH-607	Advanced Group Theory	3(3-0)
MTH-609	Mathematical Statistics I	3(3-0)
MTH-611	Quantum Mechanics I	3(3-0)
MTH-613	Fluid Mechanics I	3(3-0)
MTH-615	Advanced Topology	3(3-0)

MTH-617	Algebraic Topology	3(3-0)
MTH-619	Continuous Groups	3(3-0)
MTH-621	Rings and Modules	3(3-0)
MTH-623	Special Theory of Relativity	3(3-0)
MTH-625	Operations Research	3(3-0)
MTH-627	Graph Theory	3(3-0)
Total		**17(17-0)**

Semester VIII

Course Code	Title of the Course	Credit Hours
Major Course		
MTH-602	Probability Theory	3(3-0)
MTH-604	Integral Equations	3(3-0)
MTH-606	Numerical Analysis II	3(3-0)
Elective Courses (3 Courses or 1 Course and (Project/ Thesis/Internship)) from the following		
MTH-608	Theory of Modules	3(3-0)
MTH-610	Algebraic Number Theory	3(3-0)
MTH-612	Category Theory	3(3-0)
MTH-614	Galois Theory	3(3-0)
MTH-616	Mathematical Statistics II	3(3-0)
MTH-618	Theory of Elasticity	3(3-0)
MTH-620	Electromagnetism	3(3-0)
MTH-622	Quantum Mechanics II	3(3-0)
MTH-624	Theory of Optimization	3(3-0)
MTH-626	Measure Theory	3(3-0)
MTH-628	Combinatorics	3(3-0)
MTH-632	Fluid Mechanics II	3(3-0)
MTH-631	Project	3(3-0)
Total		**18(18-0)**

Program	Award	Duration	Semester	Credit Hours
Bachelor of Sciences	BS Mathematics	4Years	8 Semesters	140