

# Doctor of Philosophy (PhD) in Mathematics

## YEAR ONE

Course Code	PhD: <b>First Semester Courses Year 1</b>	Credit
MTH 901	Linear Algebra	5
MTH 902	Data Analysis	5
MTH 903	Geometry	5
MTH 904	Advanced Probability	5
MTH 905	Software Metrics	5
MTH 906	Combinatorics	5
<b>TOTAL CREDITS</b>		<b>30</b>
Course Code	PhD: <b>Second Semester Courses Year 1</b>	Credit
MTH 911	Advanced Abstract Algebra	5
MTH 912	Real Analysis	5
MTH 913	Real Variables	5
MTH 914	Quantitative Analysis	5
MTH 915	Qualitative Analysis	5
MTH 916	Year One: PhD Research Thesis	5
<b>TOTAL CREDITS</b>		<b>30</b>

## YEAR TWO

Course Code	PhD: <b>First Semester Courses Year 2</b>	Credit
MTH 921	Topology	5
MTH 922	Differential Equations	5
MTH 923	Functional Analysis	5
MTH 924	Analytical Mechanics	5
MTH 925	Calculus of Variations	5
MTH 926	Number Theory	5
<b>TOTAL CREDITS</b>		<b>30</b>
Course Code	PhD: <b>Second Semester Courses Year 2</b>	Credit
MTH 1001	Partial Differential Equations	5
MTH 1002	Matrix Algebra	5
MTH 1003	Modern Algebra	5
MTH 1004	Vector Analysis	5
MTH 1005	Numerical Methods	5
MTH 1006	Year Two: PhD Research Thesis	5
<b>TOTAL CREDITS</b>		<b>30</b>



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## YEAR THREE

Course Code	PhD: <b>First Semester Courses Year 3</b>	Credit
MTH 1011	Discrete Mathematics	5
MTH 1012	Statistics and Probability Theory	5
MTH 1013	Mathematics Finance	5
MTH 1014	Linear Programming	5
MTH 1015	Applied Mathematics	5
MTH 1016	Computational Mathematics	5
<b>TOTAL CREDITS</b>		<b>30</b>
Course Code	PhD: <b>Second Semester Courses Year 3</b>	Credit
MTH 1021	Computational Techniques	5
MTH 1022	Mathematical Statistics	5
MTH 1023	Optimization and Variational Methods	5
MTH 1024	Riemannian Geometry	5
MTH 1025	Year Three: PhD Research Thesis	10
<b>TOTAL CREDITS</b>		<b>30</b>

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