

**MATHEMATICS PhD Program (on BSc)**

<b>REMEDIAL COURSES</b>				
<b>Dept.</b>	<b>Code</b>	<b>Course Name</b>	<b>CR.</b>	<b>ECTS</b>
MATH	132	Calculus II	NC	
MATH	231	Linear Algebra I	NC	
MATH	232	Linear Algebra II	NC	
MATH	245	Ordinary Differential Equations	NC	
MATH	246	Advanced Ordinary Differential Equations	NC	
MATH	255	Calculus III	NC	
MATH	256	Introduction to Real Analysis	NC	
MATH	312	Elementary Differential Geometry	NC	
MATH	321	Introduction to Group Theory	NC	
MATH	322	Abstract Algebra	NC	
MATH	343	Partial Differential Equations	NC	
MATH	351	Measure and Integration	NC	
MATH	357	Complex Analysis	NC	
MATH	421	Elementary Number Theory	NC	
MATH	439	Metric and Topological Spaces	NC	
MATH	452	Introduction to Functional Analysis II	NC	
<b>PROGRAM COURSES</b>				
<b>Dept.</b>	<b>Code</b>	<b>Course Name</b>	<b>CR.</b>	<b>ECTS</b>
MATH	521	Algebra I	3	10
MATH	531	Topology	3	10
MATH	553	Complex Analysis	3	10
MATH	555	Measure And Integration Theory	3	10
MATH	580	Methods in Mathematical Reasoning	3	10
		Departmental Elective I	3	10
		Departmental Elective II	3	10
		Departmental Elective III	3	10
		Departmental Elective IV	3	10
		Departmental Elective V	3	10
		Departmental Elective VI	3	10
		Departmental Elective VII	3	10
		Departmental Elective VIII	3	10
		Departmental Elective IX	3	10
MATH	690	Seminar II	NC	10
MATH	691	Independent Study for Qualifying Exam	NC	30
MATH	700	PhD Dissertation	NC	150
		<b>TOTAL</b>	<b>42</b>	<b>330</b>
<b>EXTRA/NON-DEGREE COURSES</b>				
<b>Dept.</b>	<b>Code</b>	<b>Course Name</b>	<b>CR.</b>	<b>ECTS</b>
		Extra/Non-degree	NC	
		Extra/Non-degree	NC	

<b>Course Group</b>	<b>Description</b>
Departmental Elective I-IX	Mathematics courses under the GSNAS.
Extra/Non-degree	Optional non-credit (NC) courses that are not part of the program.
Remedial Courses	Undergraduate level courses offered by department.