

# MASTER OF SCIENCE (MATHS)

Duration: 24 Months (2Years) Eligibility: Graduation with Science Subjects

<b>COURSE STRUCTURE M.SC MATHEMATICS SEMESTER 1st</b>													
Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
<b>Theory Group</b>													
6SMMA101	<b>Core Course</b>	Advance Abstract Algebra-I	100	50	17	20	08	30	12	4	-	-	4
6SMMA102	<b>Core Course</b>	Real Analysis-I	100	50	17	20	08	30	12	4	-	-	4
6SMMA103	<b>Core Course</b>	Topology-I	100	50	17	20	08	30	12	4	-	-	4
6SMMA104	<b>Core Course</b>	Complex Analysis-I	100	50	17	20	08	30	12	4	-	-	4
6SMMA105	<b>Core Course</b>	Differential Equation-I	100	50	17	20	08	30	12	4	-	-	4
<b>Grand Total</b>			<b>500</b>							<b>20</b>	<b>-</b>	<b>-</b>	<b>20</b>

Minimum Passing Marks are equivalent to Grade D

L- Lectures T- Tutorials P- Practical

Major- Term End Theory / Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/Lab Assignment 50%

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<b>COURSE STRUCTURE M.SC MATHEMATICS SEMESTER IInd</b>														
<b>Course Details</b>				<b>External Assessment</b>		<b>Internal Assessment</b>				<b>Credit Distribution</b>			<b>Allotted Credits</b>	
<b>Course Code</b>	<b>Course Type</b>	<b>Course Title</b>	<b>Total Marks</b>	<b>Major</b>		<b>Minor</b>		<b>Sessional ***</b>			<b>L</b>	<b>T</b>	<b>P</b>	<b>Subject wise Distribution</b>
				<b>Max Marks</b>	<b>Min Marks</b>	<b>Max Marks</b>	<b>Min Marks</b>	<b>Max Marks</b>	<b>Min Marks</b>					
<b>Theory Group</b>														
6SMMA201	<b>Core Course</b>	Advance Abstract Algebra-II	100	50	17	20	08	30	12	4	-	-	4	
6SMMA202	<b>Core Course</b>	Real Analysis-II	100	50	17	20	08	30	12	4	-	-	4	
6SMMA203	<b>Core Course</b>	Topology-II	100	50	17	20	08	30	12	4	-	-	4	
6SMMA204	<b>Core Course</b>	Complex Analysis-II	100	50	17	20	08	30	12	4	-	-	4	
6SMMA205	<b>Core Course</b>	Differential Equation-II	100	50	17	20	08	30	12	4	-	-	4	
<b>Skill Courses</b>				<b>Term End Practical Exam</b>				<b>Sessional</b>						
****	<b>Skill Enhancement</b>	Skill Enhancement Elective Course-1	50	-	-	-	-	50	20	1	-	1	2	
	<b>Grand Total</b>		<b>550</b>							<b>21</b>		<b>1</b>	<b>22</b>	

Minimum Passing Marks are equivalent to Grade D

L- Lectures T- Tutorials P- Practical

Major- Term End Theory / Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/Lab Assignment 50%

Skill Elective I – Any other course being offered in this semester as per the list given at the end of course structure.

# MASTER OF SCIENCE (MATHS)

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<b>COURSE STRUCTURE M.SC MATHEMATICS SEMESTER IIIrd</b>													
<b>Course Details</b>				<b>External Assessment</b>		<b>Internal Assessment</b>				<b>Credit Distribution</b>			<b>Allotted Credits</b>
<b>Course Code</b>	<b>Course Type</b>	<b>Course Title</b>	<b>Total Marks</b>	<b>Major</b>		<b>Minor</b>		<b>Sessional ***</b>		<b>L</b>	<b>T</b>	<b>P</b>	<b>Subject wise Distribution</b>
				<b>Max Marks</b>	<b>Min Marks</b>	<b>Max Marks</b>	<b>Min Marks</b>	<b>Max Marks</b>	<b>Min Marks</b>				
<b>Theory Group</b>													
6SMMA301	<b>Core Course</b>	Functional Analysis-I	100	50	17	20	08	30	12	4	-	-	4
6SMMA302	<b>Core Course</b>	Integral Equation-I	100	50	17	20	08	30	12	4	-	-	4
6SMMA303	<b>Core Course</b>	Special Function -I	100	50	17	20	08	30	12	4	-	-	4
****	<b>Discipline Specific Elective</b>	Elective –I	100	50	17	20	08	30	12	4	-	-	4
****	<b>Discipline Specific Elective</b>	Elective –II	100	50	17	20	08	30	12	4	-	-	4
<b>Skill Courses</b>				<b>Term End Practical Exam</b>				<b>Sessional</b>					
****	<b>Skill Enhancement</b>	Skill Enhancement Elective Course-1	50	-	-	-	-	50	20	1	-	1	2
<b>Grand Total</b>			<b>550</b>							<b>21</b>	<b>-</b>	<b>1</b>	<b>22</b>

**Minimum Passing Marks are equivalent to Grade D**

**L- Lectures T- Tutorials P- Practical**

**Major- Term End Theory / Practical Exam**

**Minor- Pre University Test**

**Sessional weightage – Attendance 50%, Three Class Tests/Lab Assignment 50%**

**Skill Elective I – Any other course being offered in this semester as per the list given at the end of course structure.**

## MASTER OF SCIENCE (MATHS)

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COURSE STRUCTURE M.SC MATHEMATICS SEMESTER IVth													
Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
<b>Theory Group</b>													
6SMMA401	<b>Core Course</b>	Functional Analysis -I	100	50	17	20	08	30	12	4	-	-	4
****	<b>Discipline Specific Elective</b>	Elective –III	100	50	17	20	08	30	12	4	-	-	4
****	<b>Discipline Specific Elective</b>	Elective –IV	100	50	17	20	08	30	12	4	-	-	4
<b>Practical Group</b>				<b>Term End Practical Exam</b>		<b>Lab Performance</b>		<b>Sessional</b>					
	<b>Research Component</b>	Project/Internship/Dissertation/Field work & Viva Voce	200	100	33	-	-	100	40	-	-	8	8
<b>Grand Total</b>			<b>500</b>							<b>12</b>	<b>-</b>	<b>8</b>	<b>20</b>

Minimum Passing Marks are equivalent to Grade D

L- Lectures T- Tutorials P- Practical

**Major- Term End Theory / Practical Exam**

**Minor- Pre University Test**

**Sessional weightage – Attendance 50%, Three Class Tests/Lab Assignment 50%**

**Compulsory Project/Dessertation with choice in any Disciplinary specific elective. Compulsory one paper presentation certificate in related dicipline.**

### PROJECT

All the candidates of M.Sc. (Maths) are required to submit a project-report based on the work done by him/her during the project period. A detailed Viva shall be conducted by an external examiner based on the project report. Students are advised to see the detailed project related guidelines on the website of RNTU. ([www.rntu.ac.in](http://www.rntu.ac.in)) under Project Guidelines for student section.

**Outcome-**The student will identify a problem on which he/she would be able to work, identify the scope of research on the chosen topic and will frame the objectives to be addressed in the project through a work plan.

## SPECILIZATION WITH ELECTIVE

**\*Note** - Students need to select any one group and choose any two subjects from selected group for third and fourth Semester.

Electives for Third Semester			Electives for Fourth Semester		
Course Code	Course Type	List of Electives	Course Code	Course Type	List of Electives
<b>GROUP ELECTIV- I Name – M.Sc (Mathematics)</b>			<b>GROUP ELECTIVE- III Name –M.Sc (Mathematics)</b>		
6SMMA304	Discipline Specific Elective-1	Advance Discrete Mathematics	6SMMA402	Discipline Specific Elective-III	Advance Graph Theory
6SMMA305	Discipline Specific Elective-1	Partial Differential Equations	6SMMA403	Discipline Specific Elective-III	Integral Transform-II
6SMMA306	Discipline Specific Elective-1	Numerical Analysis	6SMMA404	Discipline Specific Elective-III	Special Function-II
<b>GROUP ELECTIVE -II NAME: M.Sc (Mathematics)</b>			<b>GROUP ELECTIVE – IV Name – M.Sc (Mathematics)</b>		
6SMMA307	Discipline Specific Elective-II	Mathematical Statistics	6SMMA405	Discipline Specific Elective-IV	Operation Research
6SMMA308	Discipline Specific Elective-II	Number Theory	6SMMA406	Discipline Specific Elective-IV	Metric Spaces & Fixed Point Theory
6SMMA309	Discipline Specific Elective-II	Differential Geometry	6SMMA407	Discipline Specific Elective-IV	Measure & Integration Theory

## SKILL ENHANCEMENT ELECTIVE COURSES

<b>Non-Technical</b>			
Elective No.	Department/ Faculty Name		
	<b>Faculty of Information Technology</b>		
I	SCIT 201	Data Entry Operation	2(1+0+1)
II	SCIT 301	Multimedia	2(1+0+1)
III	SCIT 501	Web Designing with HTML	2(1+0+1)
IV	SCMIT 201	Web Development	2(1+0+1)
V	SCMIT 301	LINUX	2(1+0+1)
	<b>Faculty of Management</b>		
I	SMGT 201	Briefing and Presentation Skills	2(1+0+1)
II	SMGT 301	Resolving Conflicts and Negotiation Skills	2(1+0+1)
III	SMGT 802	Entrepreneurship Development	2(1+0+1)
	<b>Faculty of Commerce</b>		
I	SCOM 201	Tally ERP 9	2(1+0+1)
II	SCOM 302	Multimedia	2(1+0+1)
III	SCOM 803	Data Analyst	2(1+0+1)
	<b>Faculty of Humanities</b>		
I	SHBA 301	Pursuing Happiness	2(1+0+1)
II	SHBA302	Communication Skill and Personality Development	2(1+0+1)
III	SHMA301	Tourism in M.P	2(1+0+1)
	<b>Faculty of Science</b>		
I	SSBI 301	Mushroom Cultivation	2(1+0+1)
II	SSPH 301	House Hold Wiring	2(1+0+1)
III	SSPH 301	Basic Instrumentation	2(1+0+1)
IV	SSPH 301	DTP Operator	2(1+0+1)
V	SSCH 301	Graphic Designing	2(1+0+1)
	<b>Faculty of Education</b>		
I	SCBE 403	Understanding of ICTC (Information Communication Technology)	2(1+0+1)
II	SCPE 201	Yoga Education	2(1+0+1)