

- vi. Ability to provide new solutions using the domain knowledge of mathematics by framing appropriate questions relating to the concepts in various fields of mathematics.
- vii. To know about the advances in various branches of mathematics.
- viii. Capability to understand and apply the programming concepts of C to mathematical investigations and problem solving.
- ix. Ability to work independently and do in-depth study of various notions of mathematics.
- x. Ability to think, acquire knowledge and skills through logical reasoning and to inculcate the habit of self learning.

4. Program Outcomes

M.Sc. in mathematics

- PO1. Have good knowledge and exposure to basic and contemporary fields of Mathematics.
- PO2. Have excellent domain knowledge in chosen elective subjects leading to research.
- PO3. Inculcate abstract mathematical and higher order logical thinking and aptitude in problem solving.
- PO4. Develop good computation, programming, data analysis skills and their applications.
- PO5. Become competent to succeed in national level competitive examinations for taking up doctoral research and teaching.

5. Programme structure

Programme Name: M.Sc. in mathematics

Total Credits: 80

Structure of the curriculum

Course category	No of courses	Credits per course	Total Credits
I. Core courses	18	2 to 4	62
II. Elective courses			
Department Specific Elective (DSE)	03	04	12
Open Elective	02	03	06
Total credits	23	2 to 4	80

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 Controller of Examinations
 Tezpur University
 Tezpur, Assam

6. SEMESTER-WISE SCHEDULE

SEMESTER I

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Hour (CH)Contact	Credits
Core	MS 401: Abstract Algebra	3	1	0	4	4
	MS 403: Linear Algebra	3	1	0	4	4
	MS 405: Real Analysis	3	1	0	4	4
	MS 411: Computer Programming	3	1	0	4	4
	MS 421: Computer Lab	0	0	1	2	1
	MS 425: Lebesgue Measure and Integration	3	1	0	4	4

SEMESTER II

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Hour (CH)Contact	Credits
Core	MS 406: Complex Analysis	3	1	0	4	4
	MS 408: Topology	3	1	0	4	4
	MS 414: Theory of Ordinary Differential Equations	3	1	0	4	4
	MS 416: Numerical Analysis ⁺	3	1	0	4	4
	MS 424: Computer Lab	0	0	2	4	1
Elective	Open Elective-I [#]	2	1	0	3	3

+ Course for which there is a separate practical unit assigned as Computer Laboratory.

List to be notified by the CoE from time to time.

SEMESTER III

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Hour (CH)Contact	Credits
Core	MS 507: Partial Differential Equations	3	1	0	4	4
	MS 510: Functional Analysis	3	1	0	4	4
	MS 517:Project	0	2	2	6	4
Elective	DSE-I*	3	1	0	4	4
	Open Elective II#	2	1	0	3	3

SEMESTER IV

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Hour (CH)Contact	Credits
	MS 501: Classical Mechanics	3	1	0	4	4
	MS 508: Mathematical Methods	3	1	0	4	4
	MS 599: Probability Theory	3	1	0	4	4
Elective	DSE-II*	3	1	0	4	4
	DSE-III*	3	1	0	4	4

* are to be chosen from a list of elective courses offered by the department of Mathematical Sciences.

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