

# Indian Institute of Technology Palakkad

## Curriculum



**Program : Master of Science**  
**Stream : Mathematics**  
**Year : 2021 Onwards**

**IIT PALAKKAD**

The M.Sc Mathematics program envisions training students to pursue careers in both academia and industry. Besides providing a firm mathematical foundation, the curriculum also provides excellent opportunities for the students to gain exposure to and specialize in pure/applied mathematics, data science, theoretical computer science among many other allied subjects.

The curriculum offers 12 core courses and 7 elective courses, the latter to be selected from a vast number of options which are being constantly upgraded keeping pace with the challenging developments in research and ever demanding requirements of the industry. Another attractive feature of this program is that the students have an opportunity to do a project in lieu of some elective courses to acquire a wider knowledge and hands-on experience in a specific area.

The department strives to have a vibrant academic ambience through several academic initiatives like long-term and short-term visitors and student seminars. Apart from preparing students for academic pursuits, the Institute also has a placement cell to facilitate industry opportunities.

The program details are outlined below :

### Semester I

No.	Code	Course Title	L	T	P	C	Category
1	MA5001	Linear Algebra	4	0	0	4	PST
2	MA5003	Real Analysis	4	0	0	4	PST
3	MA5005	Groups and Rings	4	0	0	4	PST
4	MA5007	Probability and Statistics	4	0	0	4	PST
5	MA5009	Ordinary Differential Equations	4	0	0	4	PST
		Semester Total	20	0	0	20	

### Semester II

No.	Code	Course Title	L	T	P	C	Category
1	MA5002	Multivariable Calculus	4	0	0	4	PST
2	MA5004	Measure Theory	4	0	0	4	PST
3	MA5006	Fields and Modules	4	0	0	4	PST
4	MA5008	Topology	4	0	0	4	PST
5	MA5010	Complex Analysis	4	0	0	4	PST
		Semester Total	20	0	0	20	

### Semester III

No.	Code	Course Title	L	T	P	C	Category
1	MA6005	Functional Analysis	4	0	0	4	PST
2	MA6007	Partial Differential equations	4	0	0	4	PST
3	XXXXXX	Elective 1	3	0	0	3	OE*/PSE
4	XXXXXX	Elective 2	3	0	0	3	PSE
5	XXXXXX	Elective 3/Project( Level 1)	3	0	0	3	PSE
6	GN5001	Communication and Technical Writing Skills <sup>1</sup>	2	0	0	0	IDC
		Semester Total	19	0	0	17	

### Semester IV

No.	Code	Course Title	L	T	P	C	Category
1	XXXXXX	Elective 4	3	0	0	3	OE*/PSE
2	XXXXXX	Elective 5	3	0	0	3	PSE
3	XXXXXX	Elective 6/Project( Level 2)	3	0	0	3	PSE
4	XXXXXX	Elective 7/Project( Level 2)	3	0	0	3	PSE
5	GN6001	Research methodology and professional ethics	2	0	0	0	IDC
		Semester Total	14	0	0	12	

\* A student is allowed to take a maximum of **one course in the open elective (OE) category**.

### Category-wise Summary

Code	Category Description	Credits
PST	Post-graduate Science Theory (Lecture based core courses)	48
PSP	Post-graduate Science Practice (Project/Internship based core courses)	0
PSE	Post-graduate Science Elective (Electives courses from program pool)	18
OE	Open Electives (Any post-graduate course)	3
IDC	Interdisciplinary Course	
<b>Total</b>		<b>69</b>

A list of PSEs is available at [PSEs\\_List.pdf](#)