

Indian Institute of Technology Palakkad

Curriculum



IIT PALAKKAD

Program : Master of Technology
Stream : Geotechnical Engineering
Year : 2024 Onwards

The credit requirement of the program is as follows:

Credit requirements :

Category of the course	Credits
Program Major Core (PMC)	22
Program Major Electives (PME)	9
Project Based Courses	21
Open Electives (OE)	6
Humanities and Social Sciences Elective (HSE)	0
Communication Skills	1
Technical Writing	1
Total	60

The list of PMC's with their credits is below :

S. No.	Code	Course Name	Credits
1.	CE5007	Soil Engineering	4
2.	CE5005	Geotechnical Investigations and Instrumentation	3
3.	ME5011	Mathematics for Engineers	3
4.	CE5002	Applied Soil Mechanics	4
5.	CE5006	Foundation Engineering	4
6.	CE5004	Experimental Geotechnics	2
7.	CE5101	Computational Geomechanics Lab	2

To guide the students towards arriving at a feasible ordering of courses, a course plan is proposed below. It is not mandatory to follow this plan. Multiple variations of this plan may be possible. However, students need to ensure that the credit requirements as mentioned in the table above are met. While this system allows flexibility for students to take courses in an order different from that mentioned below, the constraint that prerequisites for each course have to be cleared in advance to be able to take it, necessitates a judicious choice to complete the program within the expected time frame.

Semester I

No.	Course code	Course Title	L	T	P	C	Category
1	CE5007	Soil Engineering	3	1	0	4	PMC
2	CE5005	Geotechnical Investigation and Instrumentation	3	0	0	3	PMC
3	ME5011	Mathematics for Engineers	3	0	0	3	PMC
4		Elective 1	3	0	0	3	PME/OE
5		Elective 2	3	0	0	3	PME/OE
6	GNxxx	Communication Skills	1	0	0	1	
7	GNxxx	Technical Writing	1	0	0	1	
		Semester Total	17	1	0	18	

Semester II

No.	Course code	Course Title	L	T	P	C	Category
1	CE5002	Applied Soil Mechanics	3	1	0	4	PMC
2	CE5006	Foundation Engineering	3	1	0	4	PMC
3	CE5004	Experimental Geotechnics	0	0	3	2	PMC
4		Elective 1	3	0	0	3	PME/OE
5		Elective 2	3	0	0	3	PME/OE
6		Elective 3	3	0	0	3	PME/OE
		Semester Total	15	2	3	19	

Semester III

No.	Course code	Course Title	L	T	P	C	Category
1	CE5100	Internship/Mini-Project	0	0	0	0	CWC
2	CE5101	Computational Geomechanics Lab	0	0	3	2	PMC
3	CE5110	Project I	0	0	0	9	Project
		Semester Total	0	0	3	11	

Semester IV

No.	Course code	Course Title	L	T	P	C	Category
1	CE5120	Project II	0	0	0	12	Project
		Semester Total	0	0	0	12	

A list of approved PME's can be found at (provide a link if available) :

S. No.	Course Name
1.	Ground Improvement
2.	Soil Dynamics and Earthquake Engineering
3.	Rock Engineering
4.	Optimization Techniques in Engineering
5.	Structural Reliability
6.	Underground Structures
7.	Pavement Analysis and Design
8.	Finite Element Methods in Geotechnical Engineering
9.	Geosynthetics and Reinforced Soil Structures
10.	Unsaturated Soil Mechanics
11.	Environmental Geotechnics