Institute of Engineering & Technology

Master of Engineering (Fulltime)

ME - Computer Engineering Specialization in Software Engineering

Duration and seats: 2 Yrs. (Full Time) – 18 seats

Eligibility: A candidate seeking admission to the program should have passed with 60% (or Equivalent) in BE/BTech (or Equivalent) in an allied branch of engineering from recognized Institute/ University and Valid GATE Score in the relevant/allied branch of Engineering / Technology.

AGE LIMIT: As per the directives of Government of Madhya Pradesh, there is no upper age limit for admission in the programme.

Fees Structure:

Semester	Academic Fee	Development & Maintenance Fee	Students' Services Fee		Examination Fee	Total (Rs.)	
			Boys	Girls		Boys	Girls
First	15000	31000	3300	3111	2500	51800	51611
Second	15000	-	2911	2722	2500	20411	20222
Third	15000	31000	3300	3111	2500	51800	51611
Fourth	15000	-	2911	2722	2500	20411	20222

- Caution money (Refundable) of Rs. 4000/- will be charged additionally in the first semester.
- Alumni Fee of Rs. 500/- will be charged extra in the first semester.
- If a student repeats a paper(s) in a semester, an additional fee of Rs.500/- per paper shall be payable.
- For NRI/ FN/ PIO Candidates, a fee of US$ 3500 Per Annum shall be payable on yearly basis. They will have to pay a refundable deposit of US$ 500 once at the time of admission.
- Hostel Fee and Central Library Fee will be extra.

Objectives: Students learn the concepts of software engineering and focus on principles of systems analysis, design, implementation and testing. The course focuses on the various aspects of cost-effective software development of high-quality software. The course also has lab assignments, exposure to case studies and projects to improve their practical skills. Subject such as, Advanced Computer Architecture, Computer Networks and Software Constructions are based on the modern and recent development in the internal workings of the computer systems, designing and implementing a computer network and develop programming and coding skills. The subjects like object oriented analysis, object oriented design and software construction help the students to analyse, design and

develop a software system. These skills are necessary to plan and conduct complex systems development projects to meet customer needs and integrate software solutions into an evolving business environment.

OUTCOMES

The development of professional skills, and ethics in students. The course provides conceptual frameworks, methods, technologies and hands-on experience necessary for software development. All this forms a basis for a career in the software industry. Students also acquire specialised knowledge of specific topics, particularly in the area of software development and database systems, and networking. After completion of the course on M.E (Software Engineering) a students should be able to solve specific problems alone or in teams, manage a project from beginning to end, work independently as well as in teams, define, formulate and analyse a problem.

Curriculum & Syllabus

S. No.	Category	No. of Credits			
		SEM I	**SEM II**	**SEM III**	**SEM IV**
1.	Course Compulsory	15	15	-	-
2.	Generic Elective	4	4	-	-
3.	Programme Elective	5	5	-	-
4.	Skill development	2	2	-	-
5.	Seminar/ Workshop/ Research Tool	2	2	-	-
6.	Dissertation Phase	-	-	12	12
Actual Credits per Semester		**28**	**28**	**12**	**12**
Total actual Programme Credits					**80**
7.	Virtual Credited Comprehensive Viva	4	4	4	4
Total Credits per Semester		**32**	**32**	**16**	**16**
Total Programme Credits					**96**

SEM I				
S.NO	**Sub Code**	**Sub Name**	**Number of Credit**	**Sub Type**

			L-T-P	
1.	SER1C1	Advanced Algorithms	3-1-1	PC1
2.	SER1C2	Object Oriented Analysis & Design	3-1-1	PC2
3.	SER1C3	Software Construction	3-1-1	PC3
4.	SER1Gx	Generic Elective I	3-1-0	GE1
5.	SER1Ex	Elective I	3-1-1	PE1
6.	ASR1S1	Soft Skills -1	2-0-0	
7.	SER1W1	Seminar/ Workshop/Research Tool	0-2-0	
8.	SER1V1	Comprehensive Viva I	0-0-4	
Total Credit for SEM I			**28 actual + 4 Virtual credits**	
		List of Generic Elective I	**L-T-P**	
1.	SER1G1	Soft Computing	3-1-0	
2.	SER1G2	Distributed Operating System	3-1-0	
3.	SER1G3	Advance Computer Architecture	3-1-0	
		List of Elective I	L-T-P	
1.	SER1E1	Database Engineering	3-1-1	
2.	SER1E2	Big Data Analytics	3-1-1	
3.	SER1E3	Secure Software Engineering	3-1-1	
SEM II			**L-T-P**	
1.	SER2C4	Software Project Planning and Management	3-1-1	PC4
2.	SER2C5	Design Pattern	3-1-1	PC5
3.	SER2C6	Software Testing and Quality Assurance	3-1-1	PC6
4.	SER2Gx	Generic Elective II	3-1-0	GE2
5.	SER2Ex	Elective II	3-1-1	PE2
6.	ASR2S2	Soft Skills -2	2-0-0	
7.	SER2W2	Seminar/ Workshop/ Research Tool	0-2-0	
8.	SER2V2	Comprehensive Viva II	0-0-4	
Total Credit for SEM II			**28 actual + 4 Virtual credits**	

		List of Generic Elective II	**L-T-P**	
1.	SER2G4	Data Mining & Warehousing	3-1-0	
2.	SER2G5	Cloud Computing	3-1-0	
3.	SER2G6	Simulation and Modelling	3-1-0	
		List of Elective II	L-T-P	
1.	SER2E4	Speech And Language Processing	3-1-1	
2.	SER2E5	Aspect Oriented Software Engineering	3-1-1	
3.	SER2E6	Machine Learning	3-1-1	

SEM III			**L-T-P**	
1	SER3D1	Dissertation Phase I	0-0-12	
2	SER3V3	Comprehensive Viva III	0-0-4	
Total Credit for SEM III			**12 actual + 4 Virtual credits**	
SEM IV			**L-**	

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T-P				
1	SER4D2	Dissertation Phase II	0-0-12	
2	SER4V4	Comprehensive Viva IV	0-0-4	
Total Credit for SEM IV			**12 actual + 4 Virtual credits**	
Total Credit			**80 actual + 16 Virtual credits=96**	