

Integral University Lucknow
Department of Computer Science & Engineering

MTECH CSE (Spl. in Software Engineering)

The department of Computer Science & Engineering proposes a two-year M.Tech programme in Computer Science and Engineering, or CSE, with a specialization in “Software Engineering”.

Salient features:

Intake: Twenty (20)

Duration: Two years, divided into four semesters. The programme will offer one year of research based dissertation work. To graduate, students must complete all academic requirements, including a dissertation.

Admissions: Admissions for the year 2018 will be managed by Integral University.

Eligibility and Admission Criteria:

The candidate must have passed any one of the following:

Bachelor of Engineering /Bachelor of Technology in CSE/IT/ EC from a recognized university, MCA Degree (3 Year Programme)

Aggregate marks in the qualifying degree must be no less than 55% or equivalent cumulative grade point average (CGPA). Undergraduate candidates appearing for their final semester/year may also apply. If admitted, students in this category must submit their provisional degree certificate within 30 days of commencement.

Selection Procedure:

Applicants will be shortlisted on the basis of IUET/Academic Score and/or interview.

Those applicants who have a valid GATE score in any of these subjects: Computer Science, Information Technology, Electronics and Communication will be exempted from written test. The list of selected candidates, in order of merit, will be posted on the website. All admissions will be managed by Integral University.

Program Educational Objectives:

The PEOs of the programme are to:

- Develop technologically competent computer professionals in today's IT centric scenario by training them in the contemporary software engineering principles and paradigms.
- Provide students a deep insight into various cutting edge technologies & tools and thereby creating diverse career opportunities.
- Improve analytical, logical and presentation skills of the students by applying evolving technologies of software engineering in developing practical solutions to complex problems in consonance with the legal and ethical responsibilities.
- Provide the students with project engineering and management skills catering to the changing industry needs and constraints across the advancing domains of computing.

Program Outcomes:

Students will be enabled to:

- Apply the knowledge of software engineering principles and paradigms in the design of system components and processes that meet the specific needs of the industry.
- Identify, analyze and formulate solutions to complex engineering problems using innovative and emerging technologies.
- Conceptualize and solve engineering problems with feasible optimal solutions in consideration of socio-economic factors.
- Extract information relevant to novel problems and apply appropriate research methodology to develop scientific knowledge.
- Use the techniques, skills and CASE tools necessary for engineering practice and coordinate the construction, deployment and maintenance of software systems.
- Understand engineering and management principles to manage projects effectively keeping in view of economic and financial factors.
- Apply ethical principles and societal values to be committed to professional ethics and responsibilities and norms of the engineering practice.
- Design, develop and deliver complex, scalable and cost effective software systems by applying Software Engineering principles, tools and processes.
- Comprehend the role and responsibilities of the professional software engineer with importance to quality and management issues involved in software construction

Career Opportunities:

Our graduating students go on to become Software designer, architects, project managers and project tracking leads etc. at companies and research labs. Their experience spans Indian industry, from e-commerce, financial services and online retail to healthcare and entertainment.

Integral University Lucknow
Department of Computer Science & Engineering
Study & Evaluation Scheme
MTECH CSE (Spl. in Software Engineering)

Semester I

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
								Sessional			Exam.	
				L	T	P	C	CT	TA	Total	ESE	
1	CS 540	DC	Advanced Artificial Intelligence	3	1	0	4	25	15	40	60	100
2	CS 517	DC	Advance Software Engineering & Project Management	3	1	0	4	25	15	40	60	100
3	CS 516	DC	Advance Data Structures & Algorithm	3	1	0	4	25	15	40	60	100
4	CS 542	DC	Advanced Database System	3	1	0	4	25	15	40	60	100
5	CS 541	DC	Advanced Artificial Intelligence Lab	0	0	2	2	30	30	60	40	100
6	CS 543	DC	Advanced Database System Lab	0	0	2	2	30	30	60	40	100
			Total	12	4	4	20	160	120	280	320	600

L-Lecture T-Tutorial P-Practical C-Credits CT-Class Test TA-Teacher Assessment
Sessional Total (CA) = Class Test + Teacher Assessment
Subject Total = Sessional Total (CA) + End Semester Examination (ESE)
DC- Departmental Core
DE- Departmental Elective

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Semester II

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
				L	T	P	C	Sessional			Exam.	
								CT	TA	Total	ESE	
1	CS 520	DC	Advance Distributed Operating Systems	3	1	0	4	25	15	40	60	100
2	CS 550	DC	Object Oriented Software Engineering & UML	3	1	0	4	25	15	40	60	100
3	CS 552	DC	Software Architecture	3	1	0	4	25	15	40	60	100
4	CS 607	DC	System Simulation and Modelling	3	1	0	4	25	15	40	60	100
5	CS 612	DC	System Simulation Lab	0	0	2	2	30	30	60	40	100
6	CS 551	DC	Software - Practice and Experience Laboratory	0	0	2	2	30	30	60	40	100
			Total	12	4	4	20	160	120	280	320	600

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Semester III

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
				L	T	P	C	Sessional			Exam.	
								CT	TA	Total	ESE	
1	CS 628	DC	Software design	3	1	0	4	25	15	40	60	100
2	CS 630	DC	Agile Software Processes	3	1	0	4	25	15	40	60	100
3		DE	Elective-1	3	1	0	4	25	15	40	60	100
4	CS 600	DC	M.Tech. Dissertation	0	0	4	4	-	-	60	40	100
5	CS 629	DC	System Design Project	0	0	2	2	30	30	60	40	100
			Total	09	3	6	18	-	-	240	260	500

Elective-1:

CS 631 Usability Engineering
 CS 632 Software Requirement Engineering
 CS 633 Software Testing & Quality Management (CS 524)

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Semester IV

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
								Sessional			Exam.	
				L	T	P	C	CT	TA	Total	ESE	
1	CS 699	DC	M.Tech. Dissertation	0	0	0	4	-	-	60	40	100
2	CS 699	DC	M.Tech. Dissertation	0	0	0	4	-	-	60	40	100
3	CS 699	DC	M.Tech. Dissertation	0	0	0	4	-	-	60	40	100
4	CS 699	DC	M.Tech. Dissertation	0	0	0	4	-	-	60	40	100
			Total	0	0	0	16	-	-	240	160	400

L-Lecture **T**-Tutorial **P**-Practical **C**-Credits **CT**-Class Test **TA**-Teacher Assessment
Sessional Total (CA) = Class Test + Teacher Assessment
Subject Total = Sessional Total (CA) + End Semester Examination (ESE)
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Total Credit of the Course: 20+20+18+16 = 74