



संगणक विज्ञान एवं अभियांत्रिकी विभाग  
 Department of Computer Science & Engineering  
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Proposed Curriculum

**M.Tech. AI**

Cat.	Course Number, Course Title		L-T-P	Credits	Cat.	Course Number, Course Title		L-T-P	Credits
<b>I Semester</b>					<b>II Semester</b>				
C	CSL7XX0	Mathematical Foundations for Computer Science	3-0-0	3	C	MEL7XX0	Deep Learning	3-0-0	3
C	CSL7XX0	Artificial Intelligence	3-0-0	3	E	XXX7XX0	Elective	3-0-0	3
C	CSL7XX0	Machine Learning	3-0-0	3	E	XXX7XX0	Elective	3-0-0	3
E	XXX7XX0	Elective	3-0-0	3	E	XXX7XX0	Elective	3-0-0	3
NG1	HSN7XX0	Non-Graded I	1-0-0	S/X	NG2	HSN7XX0	Non-Graded II	1-0-0	S/X
<i>Total</i>				<b>12</b>	<i>Total</i>				<b>12</b>
<b>III Semester</b>					<b>IV Semester</b>				
T	MET8XX0	Thesis		16	T	MET8XX0	Thesis		16
<i>Total</i>				<b>16</b>	<i>Total</i>				<b>16</b>

**Reduced List of Electives AI**

S.No.	Course Number	Course Title		
1	CSL7XXX	Autonomous Systems	3-0-0	3
2	CSL7XXX	Speech Understanding	3-0-0	3
3	CSL7XXX	Computer Vision	3-0-0	3
4	CSL7XXX	Foundation Models and Generative AI	3-0-0	3
5	CSL7XXX	Learning on Graphs and its Applications	3-0-0	3
6	CSL7XXX	Machine Learning with Big Data	3-0-0	3
7	CSL7XXX	ML Ops and DL-Ops	2-0-2	3
8	CSL7XXX	Natural Language Understanding	3-0-0	3
9	CSL7XXX	Selected Topics in AI	3-0-0	3
10	CSL7XXX	Computer Graphics	3-0-0	3
11	CSL7XXX	Systems for ML	3-0-0	3
12	CSL7xx0	Advanced Data Structures and Algorithms	3-0-0	3

S. No	Category	Course Category Title	Total Courses	Total Credits
1	C	COMPULSORY	4	12
2	E	ELECTIVES	4	12
3	NG	Non-Graded	2	0
3	T	Thesis	<b>2 (16+16)</b>	32
<i>Total</i>				<b>56</b>

Note: 1. The department should retain only the relevant courses as electives for the M.Tech. program. The courses that are either irrelevant or not attracting more than 10 students should be removed from the PG booklet.

#### Course (Credit) Requirements for PhD students

S.No.	Ph.D. in	With	Minimum courses required
1.	Engineering discipline	M.Tech., M.E. or M.Sc. (Engineering) in an Engineering discipline	4 Compulsory
		M.Sc. degree in a Science discipline	4 Compulsory (Same as M.Tech. Compulsory) + 4 Electives
		B.Tech., B.S., B.E. or B.Sc. (Engineering) in an Engineering discipline	4 Compulsory (Same as M.Tech. Compulsory) + 4 Electives
2.	Science, Humanities or Social Science discipline	M.Sc., M.A. and M.Phil. degree in a Science, Humanities or Social Science discipline	4 Compulsory
3.	Management, Design	As per approved norms after 2 years of Masters degree in appropriate discipline	4 Compulsory

#### Note:

1. Departments can design various sets of compulsory courses based on their research themes. These courses can either be existing ones or new courses introduced by the department.
2. The four compulsory courses account for a minimum of 12 credits as per the current regulations.
3. Direct Ph.D. students holding a B.Tech. degree can choose to pursue an additional M.Tech. degree by fulfilling the M.Tech. thesis requirements. The M.Tech. thesis work must be separate from the Ph.D. thesis. The additional degree will be awarded alongside the Ph.D. degree only upon the completion of the Ph.D. program.