

## Course Structure of M.Tech. Degree Program in Computer Science and Engineering (from AY 2023-24)

**Minimum Educational Qualification:** Four-year Bachelor's degree in Computer Science and Engineering, Information Technology, Electronics and Communication Engineering or Electronics Engineering or Electrical Engineering (with first division/ first class/ as defined by the awarding Institute/ University or Equivalent grade for Indian applicants and equivalent to International applicants, as assessed by the Institute). Relaxation of 5% in qualifying degree is applicable for SC, ST and PwD category applicants.

### **Qualifying Examination:**

**(a) Indian Students:** Valid GATE qualification in CS.

**(b) International Students:** Valid score of GRE /TOEFL/IELTS or equivalent.

### **Categories of Admission:**

**(a) Indian Students:** Teaching Assistantship (TA); (ii) Highly motivated sponsored candidate (SW) on full-time basis from highly reputed R & D organizations such as DRDO, ISRO, BHEL, C-DAC, ADE, ADA, etc. and highly reputed Industries; (iii) Defence Forces (DF): Candidates sponsored by the Defence Forces; (iv) Regular institute staff (IS) of IIT Indore on part-time basis only.

*Candidates of SW, DF and IS categories will not be provided any scholarship.*

**(b) International Students:** (i) International self-financed (ISF) students; (ii) International students sponsored by non-government organizations or by a reputed industry (ISW); (iii) International students sponsored by foreign government or its organizations or through mutual collaborative programs of India with other countries (GSW)

**Duration of Program:** 2 years on full-time basis.

**Number of intakes:** 15

### **Course Structure of 2-Year Full Time M. Tech. Program**

#### **1<sup>st</sup> Year: Semester-I**

Course Code	Course Title	Contact Hours (L-T-P)	Credit
CS 636	Mathematics-I: Linear Algebra and Probability	2-1-0	3
CS 639	Computing Foundations: Operating Systems	1-0-2	2
CS 641	Computing Foundations: Compiler Design	1-0-1	1.5
CS 643	Computing Foundations: Computer Architecture	1-0-1	1.5
CS 411/ CS 611	Advanced Algorithms	2-1-0	3
ZZ XXX	Elective-1	X-X-X	3
CS 653	Programming Lab	1-0-4	3
<b>Total minimum credits earned during the semester</b>			<b>17</b>
<b>Additional course (as per the requirement basis)</b>			
HS 641	English Communication Skills	2-0-2	PP/NP

**1<sup>st</sup> Year: Semester-II**

Course Code	Course Title		Contact hours (L-T-P)	Credit
CS 637	Mathematics-II: Theory of Computation and Graph Theory		2-1-0	3
ZZ 6XX	Elective-2		X-X-X	3
	Bucket -1 (AI/ML)	Bucket -2 (Networking and Cyber Security)		
CS 4XX/ CS 6XX	Elective-3	Elective-3	X-X-X	3
CS 4XX/ CS 6XX	Elective-4	Elective-4	X-X-X	3
CS 4XX/ CS 6XX	Elective-5	Elective-5	X-X-X	3
CS 698	PG Seminar Course		0-2-0	2
<b>Total minimum credits earned during the semester</b>				<b>17</b>

**2<sup>nd</sup> Year: Semester-III**

Course code	Course Title	Contact Hours L-T-P	Credits
CS 799	M. Tech. Research Project (Stage-I)	0-0-36	18
<b>Total minimum credits to be earned during the semester</b>			<b>18</b>

**2<sup>nd</sup> Year: Semester-IV**

Course code	Course Title	Contact Hours L-T-P	Credits
CS 800	M. Tech. Research Project (Stage-II)	0-0-36	18
<b>Total minimum credits to be earned during the semester</b>			<b>18</b>
<b>Total minimum credits to be earned during the program</b>			<b>70</b>