



## I Semester

Section A, B, C, D & E					Section F, G, H, I & J							
Code	Course Name	Periods per week			Credits	Code	Course Name	Periods per week			Credits	
		L	T	P				L	T	P		
MC1101	Mathematics 1	3	1	-	4	MC1101	Mathematics 1	3	1	-	4	
PY1102	Physics	3	-	-	3	CY1107	Engineering Chemistry	3	-	-	3	
CE1103	Engineering Mechanics	2	1	-	3	EE1108	Basic Electrical & Electronics Engineering	2	1	-	3	
ME1104	Engineering Graphics	1	-	-	1	ME1109	Manufacturing Science	1	-	-	1	
CS1105	Computer Programming & Problem Solving	2	-	-	2	CY1110	Environmental Science	2	-	-	2	
HS1106	Communication Skill	1	-	-	1	BS1111	Biology for Engineers	2	-	-	2	
CE1121	Engineering Mechanics Laboratory	-	-	2	1	HS1112	Indian knowledge Systems and Cognitive Well being	-	2	-	2	
PY1122	Physics Laboratory	-	-	2	1	EE1125	Basic Electrical & Electronics Engineering Laboratory	-	-	2	1	
ME1123	Engineering Graphics Laboratory	-	-	2	1	CY1126	Engineering Chemistry Laboratory	-	-	2	1	
CS1124	Computer Programming Laboratory	-	-	2	1	ME1127	Manufacturing Science Laboratory	-	-	2	1	
HS1128	Language Laboratory	-	-	2	1	SA1143 or SA1144 or SA1145	NSS or Yoga or Universal Human Values and Professional Ethics	-	-	2	1	
SA1141 or SA1142	Life Skill Management or Physical Education	-	-	2	1			1	3	4	8	21
		1	2	1	20			1	1	-	2	
NC115*	National Cadet Corps I	1	1	-	2	NC115*	National Cadet Corps I	1	1	-	2	

\*Not to be counted in SGPA/ CGPA calculations

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01/06/2026

01/06/26



**II Semester**

Section A, B, C, D & E					Section F, G, H, I & J						
Code	Course Name	Periods per week			Credits	Code	Course Name	Periods per week			Credits
		L	T	P				L	T	P	
MC1201	Mathematics II	3	1	-	4	MC1201	Mathematics II	3	1	-	4
CY1207	Engineering Chemistry	3	-	-	3	PY1202	Physics	3	-	-	3
EE1208	Basic Electrical & Electronics Engineering	2	1	-	3	CE1203	Engineering Mechanics	2	1	-	3
ME1209	Manufacturing Science	1	-	-	1	ME1204	Engineering Graphics	1	-	-	1
CY1210	Environmental Science	2	-	-	2	CS1205	Computer Programming & Problem Solving	2	-	-	2
BS1211	Biology for Engineers	2	-	-	2	HS1206	Communication Skill	1	-	-	1
HS1212	Indian knowledge Systems and Cognitive Well being	-	2	-	2	CE1221	Engineering Mechanics Laboratory	-	-	2	1
EE1225	Basic Electrical & Electronics Engineering Laboratory	-	-	2	1	PY1222	Physics Laboratory	-	-	2	1
CY1226	Engineering Chemistry Laboratory	-	-	2	1	ME1223	Engineering Graphics Laboratory	-	-	2	1
ME1227	Manufacturing Science Laboratory	-	-	2	1	CS1224	Computer Programming Laboratory	-	-	2	1
SA1243 or SA1244 or SA1245	NSS or Yoga or Universal Human Values and Professional Ethics	-	-	2	1	HS1228	Language Laboratory	-	-	2	1
		13	4	8	21			12	2	12	20
NC125*	National Cadet Corps I	1	1	-	2	NC125*	National Cadet Corps I	1	1	-	2

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**First Year**

Total Credits	Lecture	Tutorial	Practical	Hours
41	25	6	20	41

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मौलाना आज़ाद राष्ट्रीय प्रौद्योगिकी संस्थान, भोपाल-462003

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY BHOPAL – 462003  
**B.Tech. Scheme of Study (Branch: Computer Science and Engineering)**  
 Session 2025-26 Onwards

**B. Tech. III Semester**

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
CS2000	Discrete Mathematics	3	-	-	3
CS2001	Data Structure and Algorithms	3	-	-	3
CS2101	Database Management Systems*	3	-	-	3
CS2102	Principles of Programming Languages	3	-	-	3
CS2103	Digital Circuit Design	3	-	-	3
CS2104	Data Communication	3	-	-	3
CS2105	Data Structures and Algorithm Lab	-	-	2	1
CS2106	Database Management Systems Lab	-	-	2	1
CS2107	Principles of Programming Languages Lab	-	-	2	1
CS2108	Digital Circuit Design Lab	-	-	2	1
CS2109	Professional Practice	-	2	-	2
<b>Total Hours = 30</b>		<b>18</b>	<b>0</b>	<b>12</b>	<b>24</b>
<b>Total Credits (Cumulative)</b>					<b>65</b>
<b>Additional Subject: National Cadet Corps (NCC)</b>					
NC 2151	National Cadet Corps III	1	5	1	7
<b>Total Credits (Cumulative)</b>					<b>11</b>
<b>Minor 1*</b>		3	-	-	3

**B. Tech. IV Semester**

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
HS2001	Fundamental of Entrepreneurship	2	1	-	3
CS2201	Software Engineering	3	-	-	3
CS2202	Computer System Organization*	3	-	-	3
CS2203	Theory of Computation	3	-	-	3
CS2204	Machine Learning	3	-	-	3
CS2205	Algorithm Design & Analysis	3	-	-	3
CS2206	Algorithm Design & Analysis Lab	-	-	2	1
CS2207	Computer System Organization Lab	-	-	2	1
CS2208	Machine Learning Lab	-	-	2	1
CS2209	Project-Based Lab-1	-	-	2	1
<b>Total Hours = 26</b>		<b>17</b>	<b>1</b>	<b>8</b>	<b>22</b>
<b>Total Credits (Cumulative)</b>					<b>87</b>
<b>Additional Subject: National Cadet Corps (NCC)</b>					
NC2251	National Cadet Corps IV	2	-	1	3
<b>Total Credits (Cumulative)</b>					<b>14</b>
<b>Minor 2*</b>		3	-	-	3

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**B. Tech. V Semester**

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
CS3101	Artificial Intelligence*	3	-	-	3
CS3102	Data Warehousing & Mining	3	-	-	3
CS3103	Operating Systems	3	-	-	3
CS3104	Statistical Models for Data Interpretation and Analysis	3	-	-	3
CS3105	Computer Networks	3	-	-	3
CS3151-3159	Departmental Elective-1 (A)	3	-	-	3
CS3106	Artificial Intelligence and Data Warehousing & Mining Lab	-	-	2	1
CS3107	Operating Systems Lab	-	-	2	1
CS3108	Computer Networks Lab	-	-	2	1
CS3109	Mini Project Lab	-	-	2	1
CS3110	Internship/ Industrial Training	-	-	2	1
<b>Total Hours = 28</b>		<b>18</b>	<b>0</b>	<b>10</b>	<b>23</b>
<b>Total Credits (Cumulative)</b>					<b>110</b>
<b>Additional Subject: National Cadet Corps (NCC)</b>					
NC3151	National Cadet Corps V	1	5	1	7
<b>Total Credits (Cumulative)</b>					<b>21</b>
<b>*Optional</b>	[NPTEL/SWAYAM Courses only]	3	-	-	3
	<b>Minor 3*</b>	3	-	-	3

**B. Tech. VI Semester**

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
CS3201	Computer & Network Security	3	-	-	3
CS3202	Compiler Design	3	-	-	3
CS3203	Generative AI	3	-	-	3
CS3204	Quantum Computing*	3	-	-	3
CS3251-3259	Department Elective-2 (A)	3	-	-	3
CS3205	Quantum Computing Lab	-	-	2	1
CS3206	Compiler Design Lab	-	-	2	1
CS3207	Network & System Securities Lab	-	-	2	1
CS3208	Generative AI Lab	-	-	2	1
CS3209	Project-Based Lab-2	-	-	4	2
<b>Total Hours = 25</b>		<b>15</b>	<b>2</b>	<b>8</b>	<b>21</b>
<b>Total Credits (Cumulative)</b>					<b>131</b>
<b>Additional Subject: National Cadet Corps (NCC)</b>					
NC3251	National Cadet Corps VI	2	-	1	3
<b>Total Credits (Cumulative)</b>					<b>24</b>
<b>*Optional</b>	[NPTEL/SWAYAM Courses only]	3	-	-	3
	<b>Minor 4*</b>	3	-	-	3

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**B. Tech. VII Semester**

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
HS4101	Engineering Economics & IPR	3	-	-	3
CS4101	Computer Visions*	3	-	-	3
CS4151-4159	Department Elective-3 (A)	3	-	-	3
CS4161-4169	Department Elective-4 (A)	3	-	-	3
CS4181	Open Elective-1(C)	3	-	-	3
CS4102	Computer Vision Lab	-	-	2	1
CS4103	Project-1	-	-	4	2
CS4104	Internship/Field Training	-	-	2	1
<b>Total Hours = 23</b>		<b>15</b>	<b>-</b>	<b>8</b>	<b>19</b>
<b>Total Credits (Cumulative)</b>					<b>150</b>
<b>*Optional</b>	[NPTEL/SWAYAM Courses only]	3	-	-	3
	<b>Minor 5*</b>	3	-	-	3

**B. Tech. VIII Semester**

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
CS4251 - 4259	Department Elective-5(A) [NPTEL/SWAYAM Courses only]	3	-	-	3
CS4261 - 4269	Department Elective-6(A) [NPTEL/SWAYAM Courses only]	3	-	-	3
CS4201/CS4202	Project-2/ Internship#	-	-	16	8
CS4203	General Proficiency	-	-	-	1
<b>Total Hours = 22</b>		<b>6</b>	<b>-</b>	<b>16</b>	<b>15</b>
<b>Cumulative Credits</b>					<b>165</b>

# It May be earned by startup activity.

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Departmental Elective-1 (A)	
CS3151	Advanced Computer Architecture
CS3152	Computer Graphics
CS3153	UNIX Internals & Shell Programming
CS3154	Cybercrime and Information Warfare
CS3155	Cryptography

Department Elective-2 (A)	
CS3251	Randomized Algorithms
CS3252	Object-Oriented Design & Modelling
CS3253	Advanced Data Structures
CS3254	Data Science
CS3255	DevOps

Department Elective-3 (A)	
CS4151	Parallel Algorithms
CS4152	Ethical Hacking
CS4153	TCP/IP and Web Technology
CS4154	Distributed System

Department Elective-4 (A)	
CS4161	Internet of Things
CS4162	Web Search and IR
CS4163	Natural Language Processing
CS4164	Wireless Networks
CS4165	Software Defined Networks

Department Elective-5(A) [NPTEL/SWAYAM Courses only]	
CS4251	Big Data Technologies
CS4252	Optimization Techniques
CS4253	Software Testing
CS4254	Biometrics
NPTEL / SWAYAM Courses offered by the department	

Department Elective-6(A) [NPTEL/SWAYAM Courses only]	
CS4261	Mobile Computing
CS4262	Information Theory & Coding
CS4263	High Performance Computing
CS4264	Embedded Systems
CS4265	Cyber-Physical System
NPTEL / SWAYAM Courses offered by the department	

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