

## 2023 BATCH CURRICULUM

<b>Semester 1</b>	<b>B.Tech. Credits = 31</b>	<b>Dual Degree Credits = 0</b>	<b>Total Credits = 31</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
CS 101	Computer programming	Engineering Sciences and skills	6
CS 105	Discrete Structures	Basic Sciences and Mathematics	6
GC 101	Gender sensitization course	Non - Credited compulsory Courses	0
HSS/IDC/ENT	Introduction to HASMED	HASMED Core	8
MA 105	Calculus	Basic Sciences and Mathematics	8
NOCS 01	NCC/NSS/NSO	Non - Credited compulsory Courses	0
PH 117	Physics lab	Basic Sciences and Mathematics	3
<b>Semester 2</b>	<b>B.Tech. Credits = 31</b>	<b>Dual Degree Credits = 0</b>	<b>Total Credits = 31</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
BB 101	Biology	Basic Sciences and Mathematics	6
CH 117	Chemistry lab	Basic Sciences and Mathematics	3
CS 108	Software Systems Lab	Department Core	6
MA 110	Linear Algebra and Differential Equations	Basic Sciences and Mathematics	8
MS 101	Makerspace	Engineering Sciences and skills	8
NOCS 02	NCC/NSS/NSO	Non - Credited compulsory Courses	0
<b>Semester 3</b>	<b>B.Tech. Credits = 36</b>	<b>Dual Degree Credits = 0</b>	<b>Total Credits = 36</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
CS 228	Logic for Computer Science	Department Core	6
CS 213	Data Structures and Algorithms	Department Core	6
CS 293	Data Structures and Algorithms Lab	Department Lab and SLP/PT/Works Visit	3
CS 230	Digital Logic Design and Computer Architecture	Department Core	6
CS 231	Digital Logic and Computer Architecture Lab	Department Lab and SLP/PT/Works Visit	3
CS 215	Data Analysis and Interpretation	Engineering Sciences and skills	6
EC 101	Economics	HASMED Core	6
<b>Semester 4</b>	<b>B.Tech. Credits = 36</b>	<b>Dual Degree Credits = 0</b>	<b>Total Credits = 36</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
CS 219	Operating Systems	Department Core	6
CS 236	Operating Systems Lab	Department Lab and SLP/PT/Works Visit	3
CS 217	Artificial Intelligence and Machine Learning	Department Core	6
CS 240	Artificial Intelligence and Machine Learning Lab	Department Lab and SLP/PT/Works Visit	3
CS 218	Design and Analysis of Algorithms	Department Core	6
DE 250	Design Thinking	HASMED Core	6
		HS 250 and ES 250	6

<b>Semester 5</b>	<b>B.Tech. Credits = 30</b>	<b>Dual Degree Credits = 6</b>	<b>Total Credits = 36</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
CS348	Computer Networks	Department Core	6
CS 378	Computer Networks Lab	Department Lab and SLP/PT/Works Visit	3
CS 339	Abstractions and Paradigms for Programming	Department Core	6
CS 355	Programming Paradigms Laboratory	Department Lab and SLP/PT/Works Visit	3
CS 310	Automata Theory	Department Core	6
		HASMED Elective	6
		Honors	6
<b>Semester 6</b>	<b>B.Tech. Credits = 30</b>	<b>Dual Degree Credits = 6</b>	<b>Total Credits = 36</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
CS 320	Implementation of Programming Languages	Department Core	6
CS 306	Implementation of Programming Languages Lab	Department Lab and SLP/PT/Works Visit	3
CS 317	Database and Information Systems	Department Core	6
CS 349	Database and Information Systems Lab	Department Lab and SLP/PT/Works Visit	3
		Department Electives	6
		HASMED Elective	6
		Honors	6
<b>Semester 7</b>	<b>B.Tech. Credits = 36</b>	<b>Dual Degree Credits = 6</b>	<b>Total Credits = 42</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
CS 492/ CS XXX		BTP/Equivalent Elective courses	6
		Flexible Elective	6
		Flexible Elective	6
		STEM Elective	6
		STEM Elective	6
		Department Electives	6
		Honors	6
<b>Semester 8</b>	<b>B.Tech. Credits = 36</b>	<b>Dual Degree Credits = 6</b>	<b>Total Credits = 42</b>
<b>Course Code</b>	<b>Course Name</b>	<b>Category</b>	<b>Credits</b>
CS 496/CS XXX		BTP/Equivalent Elective courses	12
		Flexible Elective	6
		Flexible Elective	6
		Flexible Elective	6
		Department Electives	6
		Honors	6

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<b>B.Tech. Degree Requirements</b>	
<b>Category of Courses</b>	<b>SUM of Credits</b>
Basic Sciences and Mathematics	34
BTP/Equivalent Elective courses	18
Department Core	72
Department Electives	18
Department Lab and SLP/PT/Works Visit	24
Engineering Sciences and skills	20
Flexible Elective	30
HASMED Core	20
HASMED Elective	12
HS 250 and ES 250	6
Non - Credited compulsory Courses	0
STEM Elective	12
Grand Total	<b>266</b>
<b>Prescribed Range of Credits for a UG programme is 252 to 276</b>	<b>Overall credits are in the prescribed range</b>
<b>Additional Credits for Dual Degree Requirement</b>	
<b>Category of Courses</b>	<b>SUM of Credits</b>
Dual Degree Project	72
Honors	24
PG Electives	24
Grand Total	<b>120</b>
<b>Prescribed Range of Additional Credits for Dual Degree Requirement is 120 to 124</b>	<b>Overall credits are in the prescribed range</b>
<b>Total Dual Degree Credits</b>	<b>386</b>