



DAYANANDA SAGAR  
UNIVERSITY

# Dayananda Sagar University

## School of Engineering

Devarakaggalahalli, Harohalli, Kanakapura Road, Ramanagara Dt., Bengaluru –  
562 112

Department of  
Computer Science & Technology

B.Tech. PROGRAMME- 2021 BATCH

SCHEME

(1<sup>th</sup> to 8<sup>th</sup> semester)

Academic Year 2024-25



**SCHEME - B.TECH – 2021-22 ONWARDS**  
**I SEM - CHEMISTRY CYCLE**

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	101-105 & 121-123	21EN1101	LINEAR ALGEBRA AND CALCULUS	CR	3	1	-	-	4	*	***
2	101-105 & 1 121-123	21EN1102	ENGINEERING CHEMISTRY	CR	3	-	2	-	4	*	***
3	101-105 & 121-123	21EN1103	BASIC ELECTRICAL ENGINEERING	CR	3	-	-	-	3	*	***
4	101-105 & 121-123	21EN1104	ELEMENTS OF MECHANICAL ENGINEERING	CR	2	-	2	-	3	*	***
5	101-105 & 121-123	21EN1105	FUNDAMENTALS OF PROGRAMMING	CR	3	-	4	-	5	*	***
6	101-105 & 121-123	21EN1106	ENVIRONMENTAL SCIENCES	CR	2	-	-	-	2	*	***
7	101-105 & 121-123	21EN1107	KANNADA KALI/MANASU	CR	1	-	-	-	1	*	***
					<b>17</b>	<b>01</b>	<b>08</b>	<b>--</b>	<b>22</b>		

CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits



**SCHEME - B.TECH - 2021-22 ONWARDS**  
**I SEM - PHYSICS CYCLE**

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	101-105 & 121-123	21EN1101	LINEAR ALGEBRA AND CALCULUS	CR	3	1	-	-	4	*	***
2	101-105 & 121-123	21EN1108	ENGINEERING PHYSICS	CR	3	-	2	-	4	*	***
3	101-105 & 121-123	21EN1109	BASIC ELECTRONICS	CR	3	-	2	-	4	*	***
4	101-105 & 121-123	21EN1110	ENGINEERING GRAPHICS AND DESIGN	CR	1	-	4	-	3	*	***
5	101-105 & 121-123	21EN1111	ENGINEERING MECHANICS	CR	2	-	-	-	2	*	***
6	101-105 & 121-123	21EN1112	BIOLOGICAL SCIENCES	CR	2	-	-	-	2	*	***
7	101-105 & 121-123	21EN1113	TECHNICAL COMMUNICATION	CR	2	-	-	-	2	*	***
8	101-105 & 121-123	21EN1114	DESIGN THINKING	CR	-	-	2	-	1	*	***
					<b>16</b>	<b>01</b>	<b>10</b>	<b>--</b>	<b>22</b>		
9	101-105 & 121-123	21AU0004	CONSTITUTION OF INDIA AND ETHICS	AU	02	--	--	--	--	*	***

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**SCHEME - B.TECH - 2021-22 ONWARDS**  
**II SEM - CHEMISTRY CYCLE**

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	101-105 & 121-123	21EN1201	TRANSFORMS AND DIFFERENTIAL EQUATIONS	CR	3	1	-	-	4	*	...
2	101-105 & 121-123	21EN1102	ENGINEERING CHEMISTRY	CR	3	-	2	-	4	*	...
3	101-105 & 121-123	21EN1103	BASIC ELECTRICAL ENGINEERING	CR	3	-	-	-	3	*	...
4	101-105 & 121-123	21EN1104	ELEMENTS OF MECHANICAL ENGINEERING	CR	2	-	2	-	3	*	...
5	101-105 & 121-123	21EN1105	FUNDAMENTALS OF PROGRAMMING	CR	3	-	4	-	5	*	...
6	101-105 & 121-123	21EN1106	ENVIRONMENTAL SCIENCES	CR	2	-	-	-	2	*	...
7	101-105 & 121-123	21EN1107	KANNADA KALI/MANASU	CR	1	-	-	-	1	*	...
					<b>17</b>	<b>01</b>	<b>08</b>	<b>--</b>	<b>22</b>		

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**SCHEME - B.TECH - 2021-22 ONWARDS**  
**II SEM - PHYSICS CYCLE**

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	101-105 & 121-123	21EN1201	TRANSFORMS AND DIFFERENTIAL EQUATIONS	CR	3	1	-	-	4	*	***
2	101-105 & 121-123	21EN1108	ENGINEERING PHYSICS	CR	3	-	2	-	4	*	***
3	101-105 & 121-123	21EN1109	BASIC ELECTRONICS	CR	3	-	2	-	4	*	***
4	101-105 & 121-123	21EN1110	ENGINEERING GRAPHICS AND DESIGN	CR	1	-	4	-	3	*	***
5	101-105 & 121-123	21EN1111	ENGINEERING MECHANICS	CR	2	-	-	-	2	*	***
6	101-105 & 121-123	21EN1112	BIOLOGICAL SCIENCES	CR	2	-	-	-	2	*	***
7	101-105 & 121-123	21EN1113	TECHNICAL COMMUNICATION	CR	2	-	-	-	2	*	***
8	101-105 & 121-123	21EN1114	DESIGN THINKING	CR	-	-	2	-	1	*	***
					<b>16</b>	<b>01</b>	<b>10</b>	<b>--</b>	<b>22</b>		
9	101-105 & 121-123	21AU0004	CONSTITUTION OF INDIA AND ETHICS	AU	02	--	--	--	--	*	***

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SCHEME - B. TECH – 2021-2 ONWARDS

III

SEM – COMPUTER SCIENCE & TECHNOLOGY

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	J	C	SEM	COURSE CODE
1	104	21CS2301	DISCRETE MATHEMATICAL STRUCTURES	CR	3	-	-	-	3	*	***
2	104	21CS2302	DATA STRUCTURES	CR	3	-	-	-	3	*	***
3	104	21CS2303	DIGITAL ELECTRONICS & LOGIC DESIGN	CR	3	-	-	-	3	*	***
4	104	21CS2304	FULL STACK DEVELOPMENT	CR	2	-	2	-	3	*	***
5	104	21CS2305	COMPUTATIONAL THINKING WITH PYTHON	CR	2	-	2	-	3	*	***
6	104	21CS2306	INTRODUCTION TO NETWORKS & CYBERSECURITY	CR	3	-	-	-	3	*	***
7	104	21CS2307	DATA STRUCTURES LAB	CR	-	-	2	-	1	*	***
8	104	21CS2308	DELD Lab	CR	-	-	2	-	1		
9	104	21CT2301	DESIGN TECHNOLOGY	CR	-	-	2	2	2	*	***
		21CT2302	INNOVATIVE BUSINESSES & BREAKTHROUGH TECHNOLOGIES								
10	104	21CS2310	LIBERAL STUDIES-I	CR	1	-	-	-	1	*	***
					17	-	10	02	23		

CR – CREDIT, AU – AUDIT, L – LECTURE, T – TUTORIAL, P – PRACTICAL, J – SEMINAR/PROJECT, C – NO. OF CREDITS



SCHEME – B.TECH — 2021–22 ONWARDS

IV

SEM - COMPUTER SCIENCE & TECHNOLOGY

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	J	C	SEM	COURSE CODE
1	104	21CS2401	PROBABILITY AND STATISTICS	CR	3	-	-	-	3	*	***
2	104	21CS2402	DESIGN AND ANALYSIS OF ALGORITHMS	CR	3	-	-	-	3	*	***
3	104	21CS2403	PRINCIPLES OF MICROPROCESSORS AND COMPUTER ORGANIZATION	CR	4	-	-	-	4	*	***
4	104	21CS2404	FINITE AUTOMATA & FORMAL LANGUAGES	CR	3	-	2	-	4	*	***
5	104	21CS2405	SOFTWARE ENGINEERING AND PROJECT MANAGEMENT	CR	3	-	-	-	3	*	***
6	104	21CS2406	LINUX PROGRAMMING & SCRIPTING	CR	2	-	2	-	3	*	***
7	104	21CS2407	DAA LAB	CR	-	-	2	-	1	*	***
8	104	21CS2408	MICROPROCESSORS LABORATORY	CR	-	-	2	-	1	*	***
9	104	21CT2401	SMALL E-BUSINESS LAUNCH	CR	-	2	-	2	2	*	***
10	104	21CS2410	LIBERAL STUDIES – II	CR	1	-	-	-	1	*	***
					19	2	08	02	25		

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**SCHEME - B. TECH – 2021-22 ONWARDS**  
**V SEM - COMPUTER SCIENCE & TECHNOLOGY**

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	J	C	SEM	COURSE CODE
1	104	21CT3501	DATABASE MANAGEMENT SYSTEMS	CR	03	-	-	-	03	*	***
2	104	21CT3502	OPERATING SYSTEMS	CR	03	01	-	-	04	*	***
3	104	21CT3503	MACHINE LEARNING	CR	03	-	-	02	04	*	***
4	104	21CT3504	PRODUCT DESIGN & DEVELOPMENT	CR	02	-	-	02	03	*	***
5	104	21CT35XX	TECHNOLOGY ELECTIVE-I	CR	02	-	-	02	03	*	AS INDICATED IN ELECTIVE LIST
6	104	21OEXXXX	OPEN ELECTIVE-I	CR	03	-	-	-	03	*	***
7	104	21CT3505	DATA MANAGEMENT SYSTEMS LABORATORY	CR	-	-	02	-	01	*	***
8	104	21CT3506	OPERATING SYSTEMS LABORATORY	CR	-	-	02	-	01	*	***
9	104	21CT3507	MOOC	CR	02	-	-	-	02	*	***
					<b>18</b>	<b>01</b>	<b>04</b>	<b>06</b>	<b>24</b>		

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**V SEM- TECHNOLOGY ELECTIVE – I**

SL	COURSE CODE	COURSE TITLE	SCHEME OF TEACHING					PREREQUISITE	
			L	T	P	J	C	SEM	COURSE CODE
1	21CT3508	VR AND GAME-THEORETIC SIMULATION	02	-	-	02	03	*	***
2	21CT3509	CREATIVE CODING	02	-	-	02	03	*	***
3	21CT310	CLOUD SECURITY SERVICES	02	-	-	02	03	*	***



**V SEM - OPEN ELECTIVE – I**

SL	COURSE CODE	COURSE TITLE	SCHEME OF TEACHING					PREREQUISITE	
			L	T	P	J	C	SEM	COURSE CODE
1	21OE0036	SMALL E-BUSINESS LAUNCH	03	-	-	-	03	*	***

VI

SEM - COMPUTER SCIENCE & TECNOLOGY

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	104	20CS3601	COMPILER DESIGN AND SYSTEM SOFTWARE	CR	3	1	-	-	4	*	***
2	104	20CS3602	SECURE PROGRAMMING	CR	2	-	2	-	3	*	***
3	104	20CS3603	CLOUD APPLICATION DEVELOPMENT	CR	3	-	-	-	3	*	***
4	104	20CT36XX	TECHNOLOGY ELECTIVE - 2	CR	3	-	-	-	3	*	***
5	104	20CT3601	LEAN STARTUP METHODOLOGY	CR	2	-	-	2	2	*	***
6	104	20CT3602	SPECIAL TOPICS-I	CR	-	-	2	-	1	*	***
7	104	20OE00XX	OPEN ELECTIVES -I	CR	3	-	-	-	3	*	***
8	104	20CS3604	COMPILER DESIGN AND SYSTEM SOFTWARE LAB	CR	-	-	2	-	1	*	***
9	104	20CS3605	CLOUD APPLICATION DEVELOPMENT LAB	CR	-	-	2	-	1	*	***
					16	1	8	2	21		



**VI SEM-TECHNOLOGY ELECTIVE - II**

SL	COURSE CODE	COURSE TITLE	SCHEME OF TEACHING					PREREQUISITE	
			L	T	P	J	C	SEM	COURSE CODE
1	21CT3608	HUMAN COMPUTER INTERACTION	02	-	-	02	03	*	***
2	21CT3609	DATA-DRIVEN DECISION MAKING	02	-	-	02	03	*	***
3	21CT3610	BLOCKCHAIN & CRYPTO CURRENCY	02	-	-	02	03	*	***

**VI SEM - OPEN ELECTIVE - II**

SL	COURSE CODE	COURSE TITLE	SCHEME OF TEACHING					PREREQUISITE	
			L	T	P	J	C	SEM	COURSE CODE
1	21OE0021	PRODUCT ENGINEERING & ENTREPRENEURSHIP	03	-	-	-	03	*	***



**SCHEME - B. TECH - 2021-22 ONWARDS**  
**VII SEM - COMPUTER SCIENCE & TECHNOLOGY**

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	J	C	SEM	COURSE CODE
1	104	21CT4701	PRODUCT ANALYTICS	CR	02	-	-	02	03	*	***
2	104	21CS4702	BIG DATA ANALYSIS AND DEEP LEARNING	CR	02	-	-	02	03	*	***
3	104	21CS47XX	TECHNOLOGY ELECTIVE - III	CR	02	-	-	02	03	*	AS INDICATED IN THE ELECTIVE LIST
4	104	21OEXXXX	OPEN ELECTIVE -III	CR	03	-	-	-	03	*	AS INDICATED IN THE ELECTIVE LIST
5	104	21CT4703	PROJECT PHASE-I	CR	-	-	-	06	03	*	***
					<b>09</b>	-	-	<b>12</b>	<b>15</b>		

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**VII SEM - TECHNOLOGY ELECTIVE-III**

SL	COURSE CODE	COURSE TITLE	SCHEME OF TEACHING					PREREQUISITE	
			L	T	P	J	C	SEM	COURSE CODE
1	21CT4704	AUGMENTED & MIXED REALITY	02	-	-	02	03	-	-
2	21CT4705	AWS WEB SERVICES	02	-	-	02	03	-	-
3	21CT4706	EDGE COMPUTING WITH IOT	02	-	-	02	03	-	-



**VII SEM - OPEN ELECTIVE - III**

SL	COURSE CODE	COURSE TITLE	SCHEME OF TEACHING					PREREQUISITE	
			L	T	P	J	C	SEM	COURSE CODE
1	21OE0053	TECHNOLOGY STRATEGY	03	-	-	-	03	-	-

**SCHEME - B. TECH - 2021-22 ONWARDS**  
**VIII SEM - COMPUTER SCIENCE & TECHNOLOGY**

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	J	C	SEM	COURSE CODE
1	104	21CT48XX	TECHNOLOGY ELECTIVE - IV	CR	01	-	-	02	02	*	AS INDICATED IN ELECTIVE LIST
2	104	21CT4801	PROJECT PHASE-II/VENTURE	CR	-	-	-	12	06	*	***
3	104	21CT4802	INTERNSHIP	CR	-	-	-	06	03	*	***
					<b>01</b>	-	-	<b>20</b>	<b>11</b>		



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**VIII SEM-TECHNOLOGY ELECTIVE - IV**

SL	COURSE CODE	COURSE TITLE	SCHEME OF TEACHING					PREREQUISITE	
			L	T	P	J	C	SEM	COURSE CODE
1	21CT4803	AI AS A SERVICE	01	-	-	02	02	*	***
2	21CT4804	QUANTUM CRYPTOGRAPHY	01	-	-	02	02	*	***
3	21CT4805	INDUSTRIAL INTERNET OF THINGS	01	-	-	02	02	*	***

