

SVKM's NMIMS Deemed-to-be University  
Mukesh Patel School of Technology Management and Engineering

Course Structure for B Tech Computer Engineering Program ( Batch 2022-26)					
Year of the Programme : First Year (Academic Year 2022-23)					
Semester I			Semester II		
Sr. No.	Course Name	Credit/s	Sr. No.	Course Name	Credit/s
1	Calculus	4	1	Linear Algebra and Differential Equations	4
2	Physics	4	2	Quantum and Statistical Physics	3
3	Elements of Biology	3	3	English Communication	1
4	Programming for Problem Solving	4	4	Basic Electrical and Electronics Engineering	3
5	Engineering Graphics and Design	3	5	Management Accounting for Engineers	2
6	Professional Ethics	1	6	Environmental Science	2
7	Constitution of India	0	7	Digital Manufacturing Laboratory	1
8	Critical Thinking	0	8	Electrical and Electronics Workshop	1
			9	Design Thinking	0
			10	Python Programming	1
	<b>Total</b>	<b>19</b>		<b>Total</b>	<b>18</b>
Year of the Programme : Second Year (Academic Year 2023-24)					
Semester III			Semester IV		
Sr. No.	Course Name	Credit/s	Sr. No.	Course Name	Credit/s
1	Probability and Statistics	3	1	Complex Variables and Transforms	4
2	Discrete Mathematics	3	2	Computer Organization and Architecture	3
3	Technical Communication	1	3	Design and Analysis of Algorithms	3
4	Principles of Economics and Management	3	4	Database Management Systems	3
5	Digital Logic Design	3	5	Microprocessor and Microcontroller	4
6	Data Structures and Algorithms	4	6	Theoretical Computer Science	3
7	Computer Networks	3	7	Web Programming	3
8	Data Extraction and Processing	2	8	Object Oriented Programming through JAVA	1
9	Community Service	0			
	<b>Total</b>	<b>22</b>		<b>Total</b>	<b>24</b>
Year of the Programme : Third Year (Academic Year 2024-25)					
Semester V			Semester VI		
Sr. No.	Course Name	Credit/s	Sr. No.	Course Name	Credit/s
1	Software Engineering	3	1	Cyber Security	3
2	Artificial Intelligence	3	2	Distributed Computing	3
3	Image and Video Processing	3	3	Machine Learning	3
4	Operating Systems	3	4	Department Elective II	3
5	Department Elective I	3	5	Department Elective III	3
6	Open Elective I	3	6	Open Elective III	3
7	Open Elective II	3	7	Open Elective IV	3
			8	Interpersonal Skills	1
	<b>Total</b>	<b>21</b>		<b>Total</b>	<b>22</b>
Year of the Programme : Fourth Year (Academic Year 2025-26)					
Semester VII			Semester VIII		
Sr. No.	Course Name	Credit/s	Sr. No.	Course Name	Credit/s
1	Cloud Computing	3	1	Project	10
2	Department Elective IV	3			
3	Department Elective V	3			
4	Department Elective VI	3			
5	Open Elective V	3			
6	Capstone Project	4			
7	Technical Internship	0			
	<b>Total</b>	<b>19</b>		<b>Total</b>	<b>10</b>

Total Credits for the Programme	155
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*Seema Shal*

SVKM's NMIMS  
School Name: Mukesh Patel School of Technology Management & Engineering (Mumbai, Shirpur, Navi Mumbai, Indore Campus)  
Teaching Scheme for Academic Year: 2022-23 (Batch: 2022-26)  
(As approved in the Academic Council dated 21st June 2022)

Name of the Programme: B Tech Information Technology, Computer Engineering, Computer Science, Electronics and Telecommunication Engineering, Mechatronics Engineering, Data Science, Computer Science and Engineering - Cyber Security								Year of the Programme: First Year				Semester: I													
Sr. No.	Module / Subject Code	Name of the Module	Area / Discipline	Theory Hours per week	Practicals Hours per week	Tutorial's Hours per week	Total no. of hours for the subject in a term	Credit/s	Duration of Examination (Hrs)		Mode of Exam	Examination Scheme (Weightage)							Templ ate Codes	Categor y	GR applica ble (Yes/ No)	R em ar k	Academic council date and page number		
									Term End Examination	Only ICA		Distribution of ICA Marks				Term End Examination		Total							
												Test I	Test II	Term work *	Total Marks	Scaled to (Marks)	Marks (Question Paper)	Scaled to (Marks)						Scaled Marks (ICA+ TEE)	Weigh tage %
1	702BS0C001	Calculus	BSh-Mathematics	3	0	1	60	4	3	-	Written	10	10	30	50	50	100	50	100	100	7031	COMP	Yes	#	21-06-2022, 292,562,576,447, 761,349,631
2	702BS0C002	Physics	BSh-Physics	3	2	0	75	4	3	-	Written	10	10	30	50	50	100	50	100	100	7031	COMP	Yes	#	
3	702BS0C049	Elements of Biology	BSh-Biology	3	0	0	45	3	3	-	Written	10	10	30	50	50	100	50	100	100	7031	COMP	Yes	#	
4	702CO0C001	Programming for Problem Solving	Computer Engineering	2	4	0	90	4	3	-	Written	10	10	30	50	50	100	50	100	100	7031	COMP	Yes	#	
5	702ME0C001	Engineering Graphics and Design	Mechanical Engineering	2	2	0	60	3	3	-	Practical	10	10	30	50	50	100	50	100	100	7031	COMP	Yes	** NUE	
6	702BS0C005	Professional Ethics	BSh-Other	1	0	0	15	1	-	-	-	10	10	30	50	50	-	-	50	100	7032	COMP	No	Only ICA	
7	702BS0C006	Constitution of India	BSh-Other	1	0	0	15	0	-	-	-	-	-	50	50	50	-	-	50	100	7032	COMP	No	Only ICA	
8	702BS0C007	Critical Thinking	BSh-Other	2	0	0	30	0	-	-	-	-	-	50	50	50	-	-	50	100	7032	COMP	No	Only ICA	
Total				17	8	1	390	19	15			60	60	280	400	400	500	250	650						

\* Term Work = Viva / Presentations/ Journals/ assignments/ quizzes / MCQs/Business plans/Role plans etc.

\*\* NUE = Non University Examination (Term End Examination conducted at school level)

# Calculus, Programming for Problem Solving - Syllabus common for B Tech/ MBA Tech (all programs) except CSBS and CSDS, can use common question paper.

# Elements of Biology - Syllabus common for B Tech (all program) except Civil, CSBS and CSDS, can use common question paper.

# Physics - Syllabus common for B Tech/ MBA Tech (all programs) except Civil, Mechanical, CSBS and CSDS, can use common question paper.

\*\* Engineering Graphics and Design - This course requires showcasing software competency along with drawing skills. Evaluation is done in NUE mode at the end of the semester.

Professional Ethics - This course focuses on instilling professional ethics, which are taught and assessed throughout the semester.

Constitution of India - This course focuses on making the students aware of the Constitution of India, which is taught and assessed throughout the semester.

Critical Thinking - This course inculcates and encourages Critical thinking behaviour, which is taught and assessed throughout the semester.

*Sangeeta Jayanti*  
Sangeeta / Jayanti  
Prepared / Verified by

Date :  
29.07.2022

*Amme*  
Dr. Ajay Phirke  
HoD, BSH- Department

*Alka Mahajan*  
Dr. Alka Mahajan  
Dean, MPSTME

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Mukesh Patel School of Technology Management and Engineering

Teaching & Examination Scheme of B Tech in Computer Engineering (Batch 2022-26)

S.No.	Module / Subject Code	Name of the Module	Teaching Scheme (Hours/Week)			Credits	Total Contact hours	Examination Scheme				GR applicable (Yes/No)	Remarks		
			Duration (Hrs)					Marks		ICA				TEE	Scaled to (Marks)
			L	P	T			TW	LW	Marks (Question Paper)					
			TEE					Marks		ICA				TEE	
1		Linear Algebra and Differential Equations	3	0	1	4	60	3	50	0	100	50	Yes		
2		Quantum and Statistical Physics	2	2	0	3	60	3	30	20	100	50	Yes		
3		English Communication**	0	2	0	1	30	—	0	50	—	—	No	Only ICA	
4		Basic Electrical and Electronics Engineering	2	2	0	3	60	3	30	20	100	50	Yes		
5		Management Accounting for Engineers	2	0	0	2	30	3	50	0	100	50	Yes		
6		Environmental Science**	1	0	1	2	30	—	50	0	—	—	No	Only ICA	
7		Digital Manufacturing Laboratory**	0	2	0	1	30	—	50	0	—	—	No	Only ICA	
8		Electrical and Electronics Workshop**	0	2	0	1	30	—	50	0	—	—	No	Only ICA	
9		Design Thinking**	2	0	0	0	30	—	50	0	—	—	No	Only ICA	
10		Python Programming*	0	2	0	1	30	3	30	20	100	50	Yes	NUE	
		<b>Total</b>	<b>12</b>	<b>12</b>	<b>2</b>	<b>18</b>	<b>390</b>								

L - Lecture, P - Practical, T - Tutorial, C - Credits, TEE - Term End Examination, ICA - Internal Continuous Assessment, TW - Term Work, LW - Lab Work

\*\*English Communication - course focuses on introducing the students to the basics of English language and formal communication, which requires to be assessed continuously throughout the semester.

\*\*Environmental Science - course is for the general awareness about the environment.

\*\*Digital Manufacturing Laboratory -course is a practice-oriented course. The evaluation is purely based on periodic assessments based on the jobs prepared by the students.


\*\*Electrical and Electronics Workshop - course empowers students to gather practical knowledge and skills using Internal Continues Assessment (ICA) throughout the semester.

\*\*Design Thinking - course helps to develop a human-centric approach to problem-solving, which requires to be assessed continuously throughout the semester.

\*Python Programming - Practical Oriented Course, lab examination will be conducted at scl

Date: Deepa / Jayanti  
Prepared/Verified by

  
Dr. Ajay Phirke  
Head, BSH Department

  
Dr. Alka Mahajan  
Dean, MPSTME

Note: w. e. f. for students admitted in AY 2022-23 onwards

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Teaching & Examination Scheme of B Tech in Computer Engineering (Batch 2022-26)  
A.Y. 2023-24

S. No.	Module / Subject Code	Name of the Module	Teaching Scheme (Hours / Week)			Credits	Total Contact hours	Examination Scheme					GR applicable (Yes / No)	Remark		
			Duration (Hrs)					Marks		ICA	LW	TW			TEE	Scaled to (Marks)
			L	P	T			TEE	Marks (Question Paper)							
1		Probability and Statistics	2	2	0	3	60	3	30	20	100	50	Yes			
2		Discrete Mathematics	2	0	1	3	45	3	50	0	100	50	Yes			
3		Technical Communication**	0	0	1	1	15	—	0	50	—	—	No	Only ICA		
4		Principles of Economics and Management	3	0	0	3	45	3	50	0	100	50	Yes			
5		Digital Logic Design	2	2	0	3	60	3	30	20	100	50	Yes			
6		Data Structures and Algorithms	3	2	0	4	75	3	30	20	100	50	Yes			
7		Computer Networks	2	2	0	3	60	3	30	20	100	50	Yes			
8		Data Extraction and Processing**	1	2	0	2	45	—	50	0	—	—	No	Only ICA		
9		Community Service**	0	0	0	0	0	0	50	0	—	—	—	Only ICA		
<b>Total</b>			15	10	2	22	405									

L - Lecture, P - Practical, T - Tutorial, C - Credits, TEE - Term End Examination, ICA - Internal Continuous Assessment, TW - Term work, LW - Lab work

\*\*Technical Communication - The topics included in this 1 credit course requires comprehensive and rigorous continuous assessment to ensure in-depth understanding, including formative (Topic based) and summative (end of unit) assessment that eliminates the need for term end Assessment.

\*\* Data Extraction and Processing- This course imparts knowledge of data extraction and how to process it. It is practical based course and hands on is expected from the students for better understanding. The ICA mode of evaluation enables to access practical knowledge gained throughout the semester.

\*\*Community Service - Course provides students a real-life hands on experience in the community and sensitizes them towards the societal challenges like poverty, illiteracy, hunger, child labor and inequality.

Date : Deepa / Hazel  
Prepared / Verified by

*Seema Shah*

Dr. Seema Shah  
Head, Computer Engineering Department

*Alka Mahajan*

Dr. Alka Mahajan  
Dean, MPSTME

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Teaching & Examination Scheme of B Tech in Computer Engineering (Batch 2022-26)  
A.Y. 2023-24

S. No.	Module/ Subject Code	Name of the Module	Teaching Scheme (Hours / Week)			Credits	Total Contact hours	Examination Scheme					GR applicable (Yes / No)	Remarks	
			Duration (Hrs)					Marks		ICA	LW	TEE			Scaled to (Marks)
			L	P	T			TEE	Marks (Question Paper)						
1		Complex Variables and Transforms	3	0	1	4	60	3	50	0	100	50	Yes		
2		Computer Organization and Architecture	3	0	0	3	45	3	50	0	100	50	Yes		
3		Design and Analysis of Algorithms	2	2	0	3	60	3	30	20	100	50	Yes		
4		Database Management Systems	2	2	0	3	60	3	30	20	100	50	Yes		
5		Microprocessor and Microcontroller	3	2	0	4	75	3	30	20	100	50	Yes		
6		Theoretical Computer Science	2	0	1	3	45	3	50	0	100	50	Yes		
7		Web Programming	2	2	0	3	60	3	30	20	100	50	Yes	NUE**	
8		Object Oriented Programming through JAVA	0	2	0	1	30	-	30	20	50	50	No	NUE**	
	<b>Total</b>		17	10	2	24	435								

L - Lecture, P - Practical, T - Tutorial, C - Credits, TEE - Term End Examination, ICA - Internal Continuous Assessment, TW - Term Work, LW - Lab Work, NUJ = Non University Examination (Examination conducted at school level)

\*\* Web Programming- Practical Oriented Course, lab examination will be conducted at school level

\*\* Object Oriented Programming through JAVA - This course imparts knowledge of JAVA programming. It is practical based course and hands on is expected from the students for better understanding. The ICA mode of evaluation, enables to access practical knowledge gained throughout the semester

Date: Deepa / Hazel  
Prepared/Verified by

Seema Shah  
Dr. Seema Shah  
HoD, Computer Department

Alka Mahajan  
Dr. Alka Mahajan  
Dean, MPSTME