



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
 (An Autonomous Institute Affiliated to Savitribai Phule Pune University,
 Pune)



F. Y. B. Tech.

Structure for Group 3

1. Computer Engineering 2. Information Technology Engineering
Academic Year – 2021-2022(Semester –I)

Course Code	Course	Teaching Scheme			Examination Schemes						Credits
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
ES1106	Introduction to, Statistics, Probability and Calculus.	3	1	-	15	25	60	25	-	125	4
ES1107/ ES1111	Fundamentals of Physics / Environmental Science and Engineering	3	-	2	15	25	60	-	25	125	4
ES1108	Discrete Mathematics	3	1	-	15	25	60	25	-	125	4
EC 1102/ EE 1102	Principles of Electronics Engineering/ Principles of Electrical Engineering	3	-	2	15	25	60	-	25	125	4
CS1103	Fundamentals of Computer Programming	3	-	4	15	25	60	-	50	150	5
HS1105	Business Communication and Value Science -I	-	-	2	-	-	-	-	25	25	1
ES 1104	Engineering Design and Development										
OR	Language Proficiency-I: #										
HS1101/ HS1102/ HS1103/ HS1104	English / German / Japanese / French	-	-	2	-	-	-	-	25	25	1
HS1108	Induction Training\$	Non Credit									
Total		15	2	12	75	125	300	50	150	700	23

Dr. S M Yadav
H.O.D Engg. Sciences
and Humanities

Dr. R.B.Joshi
Dean Academics



Dr. R. K. Jain
Director RSCOE, Pune



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Structure for Group 3

1. Computer Engineering 2. Information Technology Engineering

Academic Year – 2021-2022 Semester –II

Course Code	Course	Teaching Scheme			Examination Schemes						Credits
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
ES1109	Linear Algebra	3	1	-	15	25	60	25	-	125	4
ES1110	Statistical Methods	3	1	-	15	25	60	25	-	125	4
CS1104	Data Structure and Algorithms	3	-	4	15	25	60	-	50	150	5
ES1111/ ES1107	Environmental Science and Engineering/ Fundamentals of Physics	3	-	2	15	25	60	-	25	125	4
EC1102/ EE1102	Principles of Electronics Engineering/ Principles of Electrical Engineering	3	-	2	15	25	60	-	25	125	4
HS1106	Business Communication and Value Science -II	-	-	2	-	-	-	-	25	25	1
ES 1104	Engineering Design and Development										
OR	Language Proficiency-I#	-	-	2	-	-	-	-	25	25	1
HS1101/ HS1102/ HS1103/ HS1104	English / German / Japanese / French										
Total		15	2	12	75	125	300	50	150	700	23

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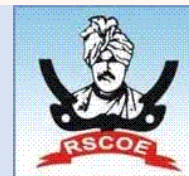
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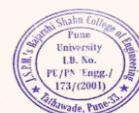
S. Y. B. Tech (Computer Engineering)
Academic Year – 2021-2022 Semester -III Structure

Course Code	Course	Teaching Scheme			Examination Schemes					Credits	
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS2101	Formal Language & Automata Theory	3	1	0	15	25	60	25	-	125	4
CS2102	Object Oriented Programming	3	0	2	15	25	60	-	25	125	4
CS2103	Computer Organization & Architecture	3	0	0	15	25	60	-	-	100	3
CS2104	Computational Statistics	3	0	2	15	25	60		25	125	4
CS2113	Software Engineering and Modelling	3	0	2	15	25	60	-	25	125	4
CS2106	Engineering Design & Innovation-I	0	1	2	-	-	-	25	25	50	2
CS2114	Programming Lab-I	-	-	2	-	-	-	-	25	25	1
HS2101/ HS2102/ HS2103/ HS2109	Language Proficiency –II English/ German/ Japanese/ French	0	0	2	-	-	-		25	25	1
	Audit Course-I	Non-Credit									
Total		15	02	12	75	125	300	50	150	700	23

Audit Course Code	Audit Course Title
HS2106	Indian Constitution
CE2113B	Environmental Awareness
CE2106B	Road Safety Management
CS2116	Online Certification Course

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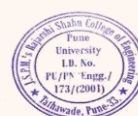
S. Y. B. Tech (Computer Engineering)
Academic Year – 2021-2022 Semester -IV Structure

Course Code	Course	Teaching Scheme			Examination Schemes					Credits	
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS2108	Operating Systems	3	0	2	15	25	60	-	25	125	4
CS2109	Database Management Systems	3	0	2	15	25	60	-	25	125	4
ES2103	Calculus and Transforms	3	0	0	15	25	60	-	-	100	3
CS2110	Computer Graphics and Animation	3	0	2	15	25	60	-	25	125	4
CS2115	Software Testing & Quality Assurance	3	0	0	15	25	60	-	-	100	3
HS2105	Business Communication & Value Science III	-	-	2	-	-	-	25	-	25	1
CS2112	Engineering Design & Innovation - II	-	2	4	-	-	-	50	50	100	4
	Audit Course-II	Non-Credit									
Total		15	02	12	75	125	300	75	125	700	23

Audit Course Code	Audit Course Title
HS2108	Indian Traditional Knowledge
ME2111C	Innovations in Agriculture Engineering
CS2117	Critical Thinking
CS2116	Online Certification Course

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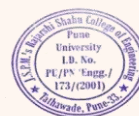
T. Y. B. Tech (Computer Engineering)
Academic Year – 2022-2023 Semester -V Structure

Course Code	Course	Teaching Scheme			Examination Schemes						Credits
		T H	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS3101	Artificial Intelligence	3	-	2	15	25	60	-	25	125	4
CS3102	Computer Networks	3	-	2	15	25	60	-	25	125	4
CS3103	Design and Analysis of Algorithms	3	-	0	15	25	60	-	-	100	3
CS3104	Elective-I	3	-	2	15	25	60	-	25	125	4
HS/ HS3111	Elective-II(Fundamentals of Management and Strategy Formulation) / Fundamentals of Management	3	-	0	15	25	60	-	25	125	3
HS3102	Business Communication & Value Science - IV	-	-	2	-	-	-	-	25	25	1
CS3106	Design Thinking		1		-	-	-	25	-	25	1
CS3107	Engineering Design & Innovation III	-	1	2	-	-	-	25	25	50	2
HS3106	Audit Course III	Non Credit									
Total		15	2	10	75	125	300	50	150	700	22

Elective I		
Course Code	Specialization Track	Course Name
CS3104A	ML-DL	Machine Learning
CS3104B	Security	Cryptology and Network Security
CS3104C	Machine Vision	Image Processing and Pattern Recognition
Elective II		
Course Code	Specialization Track	Course Name

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HS3102	Management	Fundamentals of Management and Strategy Formulation
HS3101B		Computational Finance & Modeling
HS3101C		Financial & Cost Accounting

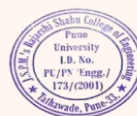
Audit Course	
Code	Name of Course
HS3106	Essence of Indian Knowledge Tradition -I
HS3108	Cultural Studies
CE3113	Urbanization and environment

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T. Y. B. Tech (Computer Engineering)
Academic Year – 2022-2023 Semester -VI Structure

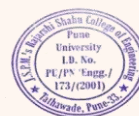
Course Code	Course	Teaching Scheme			Examination Schemes					Credits	
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS3105	Cloud Microservices & Application	3	-	-	15	25	60	-	-	100	3
CS3113	Internet of Things	3	-	-	15	25	60	-	-	100	3
CS3109	Compiler Design	3	0	2	15	25	60	-	50	150	4
CS3110	Elective III	3	0	2	15	25	60	-	50	150	4
HS/ CS3111 B	Elective-IV/Modern Web Application	3	0	-	15	25	60	-	-	100	3
CS3114	Lab Practice	-	-	4	-	-	-	-	50	50	2
CS3112	Engineering Design & Innovation IV	0	-	2	-	-	-	-	50	50	1
HS3107	Audit Course IV	Non Credit									
Total		15	0	10	75	125	300	-	200	700	20

Elective III		
Course Code	Specialization Track	Course Name
CS3110A	ML-DL	Data Mining
CS3110B	Security	Information Security
CS3110C	Machine Vision	Industrial Robotics
Elective IV		
Course Code	Specialization Track	Course Name
HS3103A	Management	Industrial Psychology
CS3111A	General	Enterprise Systems
CS3111B		Modern Web Application

Audit	
Code	Name of Course
HS3107	Essence of Indian Knowledge Tradition -II
HS3109	Introduction to Human Factors and Ergonomics
HS3110	Mind Education

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Final Year B. Tech. Computer Engineering

Proposed Structure Academic Year – 2022-2023 Semester -VII Structure

Course Code	Course	Teaching Scheme			Examination Schemes						Credits
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS4101	Industry-Sponsored Subject- Data Management, Protection, and Governance	03	-	-	15	25	60	-	-	100	3
CS4102	Blockchain Technology	03	-	02	15	25	60	-	25	125	4
CS4103	Elective V	03	-	02	15	25	60	-	25	125	4
CS4104	Digital and Social Media Marketing	03	-	-	15	25	60	-	-	100	3
CS4105	Industry Sponsored Subject - Salesforce	-	01	02	-	-	-	25	25	50	2
CS4106	Engineering Design & Innovation V	-	-	04	-	-	-	-	100	100	2
Total		12	01	10	60	100	240	25	175	600	18

Elective V

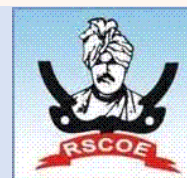
Course Code	Specialization Track	Course Name
CS4103A	ML-DL	Deep Learning
CS4103B	Security	Cyber Security and Forensic
CS4103C	Machine Vision	Augmented and Virtual Reality



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Final Year B. Tech. Computer Engineering

Proposed Structure Academic Year – 2022-2023 Sem-VIII

Track I- Entrepreneurship Track

Course Code	Course	Teaching Scheme			Examination Schemes						Credits
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS4107	Human Computer Interface	3	0	2	15	25	60	-	50	150	4
CS4108	Pervasive and Ubiquitous Computing	3	0	2	15	25	60	-	50	150	4
CS4109	Foundation for Entrepreneurship and Start up	0	2	0	-	-	-	100	-	100	2
CS4110	Entrepreneurship Lab	0	0	16	-	-	-	-	200	200	8
Total		6	2	20	30	50	120	100	300	600	18



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**Final Year B. Tech. Computer Engineering
Proposed Structure Academic Year – 2022-2023 Sem-VIII
Track II- Research and Higher Studies Track**

Course Code	Course	Teaching Scheme			Examination Schemes						Credits
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS4107	Human Computer Interface	3	0	2	15	25	60	-	50	150	4
CS4108	Pervasive and Ubiquitous Computing	3	0	2	15	25	60	-	50	150	4
CS4111	Research Methodology	3	0	0	15	25	60	-	-	100	3
CS4112	Research & higher studies Lab	0	3	8	-	-	-	50	150	200	7
Total		9	3	12	45	75	180	50	250	600	18

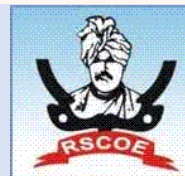


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**Final Year B. Tech. Computer Engineering
Proposed Structure Academic Year – 2022-2023 Sem-VIII**

Track III- Industry Internship

Course Code	Course	Teaching Scheme			Examination Schemes						Credits
		TH	Tut	Lab	Theory			Practical		Total	Total
					ISE (15)	MSE (25)	ESE (60)	TW	Lab		
CS4113	Industry Internship Program	-	-	32	-	-	-	100	400	500	16
CS4114	Self-study/on line course	-	-	4	-	-	-	100	-	100	2
Total		-	-	36	-	-	-	200	400	600	18