



**DEPARTMENT OF TECHNOLOGY
SHIVAJI UNIVERSITY, KOLHAPUR**

**STRUCTURE
For
FIRST YEAR
To
FINAL YEAR B. TECH.
COMPUTER SCIENCE AND TECHNOLOGY**

**TO BE EFFECTIVE FROM
ACADEMIC YEAR 20-21**



DEPARTMENT OF TECHNOLOGY
SHIVAJI UNIVERSITY, KOLHAPUR
FIRST YEAR B.TECH

Scheme of Teaching and Examination

Semester – I (Group-A)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week)				Examination Scheme (Marks)					
			L	T	P	Credits	Theory			Practical/Tutorial		
							Scheme	Max. Marks	Min. Passing \$	Scheme	Max. Marks	Min. Passing \$
BS-11A1	1.	Engineering Mathematics-I	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11A2	2.	Engineering Physics	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11A1	3.	Basics of Mechanical Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11A2	4.	Engineering Mechanics	4	-	-	04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11A3	5.	Basic Electronics Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11A3	6.	Lab. -I Engineering Physics	-	-	2	01	---	---	---	IPE	50	20
ES-11A4	7.	Lab.-II Basics of Mechanical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11A5	8.	Lab.-III Engineering Mechanics	-	-	2	01	---	---	---	IPE	50	20
ES-11A6	9.	Lab.-IV Basic Electronics Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11A7	10.	Lab.-V Computer Programming	1	-	2	02	---	---	---	IPE	50	20
ES-11A8	11.	Lab.-VI Workshop Practice	-	-	2	01	---	---	---	IPE	50	20
		Total	18	1	12	25		500			300	

Total Credits: 25

Total Contact Hours/Week: 31 hrs

Note:

\$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.

Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.

CIE – Continuous Internal Evaluation

SEE – Semester End Examination

IPE – Internal Practical Evaluation

* Semester End Examination duration will be 4 hrs



DEPARTMENT OF TECHNOLOGY
SHIVAJI UNIVERSITY, KOLHAPUR
FIRST YEAR B.TECH

Scheme of Teaching and Examination

Semester – II (Group-A)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week))				Examination Scheme (Marks)					
			L	T	P	Credits	Theory			Practical/Tutorial		
							Scheme	Max. Marks	Min. Passing \$	Scheme	Max. Marks	Min. Passing \$
BS-12A1	1.	Engineering Mathematics–II	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12A2	2.	Engineering Chemistry	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12A1	3.*	Engineering Graphics	4	-		04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12A2	4.	Basic Civil Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12A3	5.	Basic Electrical Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12A3	6.	Lab.–I Engineering Chemistry	-	-	2	01	---	---	---	IPE	50	20
ES-12A4	7.	Lab.–II Engineering Graphics	-	-	2	01	---	---	---	IPE	50	20
ES-12A5	8.	Lab.–III Basic Civil Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12A6	9.	Lab. –IV Basic Electrical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12A7	10.	Lab. –V Programming with Scilab and Matlab	-	1	-	01	---	---	---	IPE	50	20
HS-12A1	11.	Lab.–VIProfessional Communication	2	-	-	02	---	---	---	IPE	50	20
		Total	19	2	8	25		500			300	

Total Credits: 25

Total Contact Hours/Week: 29 hrs

Note:

\$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.

Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.

CIE – Continuous Internal Evaluation

SEE – Semester End Examination

IPE – Internal Practical Evaluation

* Semester End Examination duration will be 4 hrs



DEPARTMENT OF TECHNOLOGY
SHIVAJI UNIVERSITY, KOLHAPUR
FIRST YEAR B.TECH

Scheme of Teaching and Examination

Semester – I (Group-B)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week))				Examination Scheme (Marks)					
			L	T	P	Credits	Theory			Practical/Tutorial		
							Scheme	Max. Marks	Min. Passing \$	Scheme	Max. Marks	Min. Passing \$
BS-11B1	1.	Engineering Mathematics-I	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11B2	2.	Engineering Chemistry	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11B1	3.*	Engineering Graphics	4	-		04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11B2	4.	Basic Civil Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11B3	5.	Basic Electrical Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11B3	6.	Lab.-I Engineering Chemistry	-	-	2	01	---	---	---	IPE	50	20
ES-11B4	7.	Lab.-II Engineering Graphics	-	-	2	01	---	---	---	IPE	50	20
ES-11B5	8.	Lab.-III Basic Civil Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11B6	9.	Lab. -IV Basic Electrical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11B7	10.	Lab. -V Programming with Scilab and Matlab	-	1	-	01	---	---	---	IPE	50	20
HS-11B1	11.	Lab.-VIP Professional Communication	2	-	-	02	---	---	---	IPE	50	20
		Total	19	2	8	25		500			300	

Total Credits: 25

Total Contact Hours/Week: 29 hrs

Note:

\$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.

Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.

CIE – Continuous Internal Evaluation

SEE – Semester End Examination

IPE – Internal Practical Evaluation

* Semester End Examination duration will be 4 hrs



DEPARTMENT OF TECHNOLOGY
SHIVAJI UNIVERSITY, KOLHAPUR
FIRST YEAR B.TECH

Scheme of Teaching and Examination

Semester – II (Group-B)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week)				Examination Scheme (Marks)					
			L	T	P	Credits	Theory			Practical/Tutorial		
							Scheme	Max. Marks	Min. Passing \$	Scheme	Max. Marks	Min. Passing \$
BS-12B1	1.	Engineering Mathematics-II	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12B2	2.	Engineering Physics	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12B1	3.	Basics of Mechanical Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12B2	4.	Engineering Mechanics	4	-	-	04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12B3	5.	Basic Electronics Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12B3	6.	Lab.-I Engineering Physics	-	-	2	01	---	---	---	IPE	50	20
ES-12B4	7.	Lab.-II Basics of Mechanical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12B5	8.	Lab.-III Engineering Mechanics	-	-	2	01	---	---	---	IPE	50	20
ES-12B6	9.	Lab.-IV Basic Electronics Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12B7	10.	Lab.-V Computer Programming	1	-	2	02	---	---	---	IPE	50	20
ES-12B8	11.	Lab.-VI Workshop Practice	-	-	2	01	---	---	---	IPE	50	20
		Total	18	1	12	25		500			300	

Total Credits: 25

Total Contact Hours/Week: 31 hrs

Note:

\$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.

Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.

CIE – Continuous Internal Evaluation

SEE – Semester End Examination

IPE – Internal Practical Evaluation

* Semester End Examination duration will be 4 hrs.

Equivalence of First Year B. Tech**Semester I & II**

The above detailed syllabus is a revised version of the First Year B. Tech Program being conducted by the Shivaji University at the Technology Department of the University. This syllabus is to be implemented from June 2020 (Academic Year 2020-21).

The Equivalence for the Courses of First Year B. Tech Semester I and II pre-revised course under the faculty of Science and Technology is as follows.

First Year B. Tech Semester I & II

Sr. No	First Year B. Tech Semester I & II Pre-revised syllabus	First Year B. Tech Semester I & II Revised syllabus	Remark
1	Engineering Mathematics-I	Engineering Mathematics-I	Change in the Course content.
2	Engineering Physics	Engineering Physics	Change in the Course content.
3	Engineering Mechanics	Engineering Mechanics	Change in the Course content.
4	Fundamentals of Mechanical Engineering	Basics of Mechanical Engineering	Change in the title and Course content.
5	Electronic Components and Devices	Basic Electronics Engineering	Change in the title and Course content.
6	Lab.-I Engineering Physics	Lab.-I Engineering Physics	Change in the Course content.
7	Lab.-II Engineering Mechanics	Lab.-III Engineering Mechanics	Change in the Course content.
8	Lab.-III Fundamentals of Mechanical Engineering	Lab.-II Basics of Mechanical Engineering	Change in the title and Course content.
9	Lab.-IV Electronic Components and Devices	Lab.-IV Basic Electronics Engineering	Change in the title and Course content.
10	Lab.-V Professional Communication	Lab.-VI Professional Communication	Change in the Course content.
11	Lab.-VI Matlab and Scilab	Lab.-V Programming with Scilab and Matlab	Change in the title and Course content.
12	Engineering Mathematics-II	Engineering Mathematics-II	Change in the Course content.
13	Engineering Chemistry	Engineering Chemistry	Change in the Course content.

14	Fundamentals of Civil Engineering	Basic Civil Engineering	Change in the title and Course content.
15	Engineering Graphics	Engineering Graphics	Change in the Course content.
16	Fundamentals of Electrical Engineering	Basic Electrical Engineering	Change in the title and Course content.
17	Lab.-I Engineering Chemistry	Lab.-I Engineering Chemistry	Change in the Course content.
18	Lab.-II Fundamentals of Civil Engineering	Lab.-III Basic Civil Engineering	Change in the title and Course content.
19	Lab.-III Engineering Graphics	Lab.-II Engineering Graphics	Change in the Course content.
20	Lab.-IV Fundamentals of Electrical Engineering	Lab.-IV Basic Electrical Engineering	Change in the title and Course content.
21	Lab.-V Workshop Practice	Lab.-VI Workshop Practice	Change in the Course content.
22	Lab.-VI Computer Programming	Lab.-V Computer Programming	Change in the Course content.



DEPARTMENT OF TECHNOLOGY
SECOND YEAR B.TECH
 Scheme of Teaching and Examination
 Semester – III (Computer Science and Technology)

To be implemented from Academic Year 2021- 22

Course code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
		L	T	P	Credits	Theory			Practical		
						Scheme	Max. marks	Min. Passing	Scheme	Max. marks	Min. Passing
MA211	Applied Mathematics-I	3	1	-	04	CIE	30	40	IOE	50	20
						SEE	70		-	-	-
CS211	Discrete Mathematical Structure	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS212	Digital System and Microprocessor	4	-	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS213	Data Structures	4	1	-	05	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS214	Data Communication and Networking	4	-	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS212L	Digital System and Microprocessor Lab	-	-	2	01	-	-	-	IPE	50	20
									EPE	50	20
CS213L	Data Structures Lab	-	-	4	02	-	-	-	IPE	50	20
									EPE	50	20
CS214L	Data Communication and Networking Lab	-	-	2	01				EPE	50	20
	Total	18	3	08	25	-	500	-	-	300	-
HS211	Environmental Studies	02	-	-	-	Project	30	40	-	-	-
						Theory	70				
Audit Course											
HS212	Introduction to Performing Arts	02	-	-	-	Institute Level	-	-	-	-	-

Total Credits: 25

Total Contact Hours/Week: 33hrs

Note:

1. Minimum 40% marks must be secured in SEE to pass that head.
2. Students are expected to do self-study for two hours as per the guide hence contact hours to be taken as two for the calculation of contact hours.
3. Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

CIE–Mid Semester Evaluation,

SEE – Semester End Examination,

IPE – Internal Practical Evaluation,

EPE–External Practical Examination,

IOE– Internal Oral Evaluation,

EOE–External Oral Examination



DEPARTMENT OF TECHNOLOGY
SECOND YEAR B.TECH

Scheme of Teaching and Examination
Semester – IV (Computer Science and Technology)
To be implemented from Academic Year 2021-22

Course code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
		L	T	P	Credits	Theory			Practical		
						Scheme	Max. marks	Min. Passing	Scheme	Max. marks	Min. Passing
CS221	Theory of Computation	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS222	Advanced Microprocessor	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS223	Computer Organization	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS224	Software Engineering	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS225	Applied Mathematics-II	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS222L	Advance Microprocessor Lab	-	-	2	01	-	-	-	IPE	50	20
									EPE	50	20
CS226L	Linux and Shell Programming	2	-	2	03	-	-	-	IPE	50	20
									EPE	50	20
CS227L	Object Oriented Programming Lab	2	-	2	03	-	-	-	IPE	50	20
									EPE	50	20
	Total	19	3	06	25	-	500	-	-	300	-
HS221	Environmental Studies	02	-	-	-	Project	30	40	----	----	---
						Theory	70				
Audit Course											
HS222	Soft Skills Development	02	-	-	-	Institute Level	-----	-----	----	----	---

Total Credits: 25

Total Contact Hours/Week: 32hrs

Note:

1. Minimum 40% marks must be secured in SEE to pass that head.
2. Students are expected to do self-study for two hours as per the guidance given by the project guide hence contact hours to be taken as two for the calculation of contact hours.
3. Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

CIE –Mid Semester Evaluation,

SEE – Semester End Examination,

IPE – Internal Practical Evaluation,

EPE–External Practical Examination,

IOE– Internal Oral Evaluation,

EOE–External Oral Examination

Equivalence of Second Year B.Tech (Computer Science and Technology) Semester III and IV

The above detailed syllabus is a revised version of the Second Year B. Tech (**Computer Science and Technology**) Program being conducted by the Shivaji University at the Technology Department of the University. This syllabus is to be implemented from June 2021, (Academic year 2021-22). The prime feature of this revision is the transformation of the existing curriculum into the Outcome based curriculum as specified in NBA rules and regulations.

The Equivalence for the subjects/courses of **Computer Science and Technology** at Second Year B Tech Semester III and IV pre-revised Program under the faculty of Engineering and Technology is as follows.

Second Year B.Tech Semester III (Computer Science and Technology)

Sr.No	Second Year B.Tech(Computer Science and Technology) Semester III Pre-revised syllabus	Second Year B.Tech(Computer Science and Technology) Semester III Revised syllabus	Remark
1	Engineering Mathematics-III	Applied Mathematics-I	Course Name Changed Slight modification in the content
2	Discrete Mathematical Structure	Discrete Mathematical Structure	No change in the Course content
3	Digital Systems and Microprocessor	Digital System and Microprocessor	No change in the Course content
4	Data Structures with C	Data Structures	Course Name Changed Slight modification in the content
5	Data Communication	Data Communication and Networking	Course Name Changed Slight modification in the content
6	Digital System and Microprocessor Lab	Digital System and Microprocessor Lab	No change in the Course content
7	Data Structures Lab	Data Structures Lab	No change in the Course content
8	Unix and Shell Programming	Data Communication and Networking Lab	Unix and Shell Programming Shifted to Semester-IV and with changed name Linux and Shell Programming.
9	Environmental Studies	Environmental Studies	No change in the Course content
10	Introduction to Performing Arts	Introduction to Performing Arts	No change in the Audit Course content

Second Year B.Tech Semester IV (Computer Science and Technology)

Sr.No	Second Year B.Tech(Computer Science and Technology) Semester IV Pre-revised syllabus	Second Year B.Tech(Computer Science and Technology) Semester IV Revised syllabus	Remark
1.	Theory of Computation	Theory of Computation	No change in the Course content
2.	Advanced Microprocessor	Advanced Microprocessor	Slight modification in the content
3.	Computer Organization	Computer Organization	Slight modification in the content
4.	Computer Networks	Software Engineering	Computer Networks Shifted to Semester-III with Course name Data Communication and Networking
5.	Computational Mathematics	Applied Mathematics-II	Course Name Changed Slight modification in the content
6.	Advanced Microprocessor Lab	Advanced Microprocessor Lab	No change in the Course content
7.	Computer Networks Lab	Linux and Shell Programming Lab	Computer Networks Lab Shifted to Semester-III with Course name Data Communication and Networking Lab
8.	Object Oriented Lab	Object Oriented Programming Lab	Course Name Changed Slight modification in the content
9.	Environmental Studies Project Work	Environmental Studies Project Work	No change in the Course content
10.	Soft Skills Development	Soft Skills Development	No change in the Course content

For above Theory Courses 1 to 5 the Mid Semester Evaluation pattern is given below.

	CIE = 50 (UT I = 20, UT II = 20, Course work* =10)	CIE = 30 (CIE= 20, Course work =10)	CIE marks distribution.
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Audit course have not been assigned any credits. The students will be evaluated for these courses by the concerned course in charge. There will be grade conferred to the student. The grade will be based on conversion of marks obtained out of 50. (Obtaining passing grade is essential). Please refer to chart in the detail examination scheme. The chart shows the marks range and the respective grade.

***Course work:** It consists of assignments, quiz, seminars, presentations, research papers and research articles, developing working models, surveys and activities related to course as designed by the course coordinator to suit the needs of the course and to complement programme outcomes. The practical work and its journal is not part of course work.



DEPARTMENT OF TECHNOLOGY
THIRD YEAR B.TECH

Scheme of Teaching and Examination
Semester – V (Computer Science and Technology)

To be implemented from Academic Year 2022 - 23

Course code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
		L	T	P	Credits	Theory			Practical		
						Scheme	Max. marks	Min. Passing	Scheme	Max. marks	Min. Passing
CS311	System Programming	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS312	Design and Analysis of Algorithm	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS313	Operating System	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS314	Machine Learning	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS315	Database Engineering	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS316L	Free Open Source SoftwareLab	-	-	2	01	-	-	-	EOE	50	20
CS315L	Database Engineering Lab	-	-	2	01	-	-	-	EPE	50	20
CS317L	Java Programming Lab	2	-	4	04	-	-	-	IPE	50	20
									EPE	50	20
CS318	Seminar	-	-	2	01	-	-	-	IOE	50	20
CS319	Internship-I	-	-	-	01	-	-	-	IOE	50	20
	Total	17	02	10	25	-	500	-	-	300	-
Audit Course											
RM 311	Research Methodology	02	-	-	-	Institute Level	-	-	-	-	-

Total Credits: 25

Total Contact Hours/Week: 31hrs

Note:

- Minimum 40% marks must be secured in SEE to pass that head.
- Students are expected to do self-study for two hours as per the guide hence contact hours to be taken as two for the calculation of contact hours
- Theory of Machine – II: The duration of this paper shall be of 4 Hours and shall include drawing of Computer Aided Manufacturing-Follower on separate drawing sheet.
- Tool Engineering: The duration of this paper shall be of 4 Hours and shall include drawing of jigs and fixture / press tools problem on separate drawing sheet.
- Internship – I and Mini Project** shall include
 - Internship of minimum four (4) weeks should be done after SY (Semester IV) in summer vacation and it's assessment will be done in TY (Semester V) based on report submitted. – Credit 01
 - Executing a mini project and delivering a presentation with mini project report. - Credit 01

Work load of the assessment both (a) and (b) shall be assigned to the mini project seminar guide.

CIE –Mid Semester Evaluation,

SEE – Semester End Examination,

IPE – Internal Practical Evaluation,

EPE–External Practical Examination,

IOE– Internal Oral Evaluation,

EOE–External Oral Examination

Note: There will be an industrial tour/ visit based on the course requirement during semester V. The report of the visits during the tour is required to be submitted by the students.



DEPARTMENT OF TECHNOLOGY

THIRD YEAR B.TECH

Scheme of Teaching and Examination

Semester – VI (Computer Science and Technology)

To be implemented from Academic Year 2022 - 23

Course code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
		L	T	P	Credits	Theory			Practical		
						Scheme	Max. marks	Min. Passing	Scheme	Max. marks	Min. Passing
CS321	Compiler Construction	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS322	Advanced Operating System	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS323	Object Oriented Modeling and Design	4	-	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS324	Computer Graphics and Multimedia Techniques	4	-	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS325	Engineering Economics	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS323L	Object Oriented Modelling and Design Lab	-	-	2	01	-	-	-	EOE	50	20
CS324L	Computer Graphics and Multimedia Techniques Lab	-	-	2	01	-	-	-	IPE	50	20
									EPE	50	20
CS326L	Advanced Programming Lab	2	-	2	03	-	-	-	IPE	50	20
									EPE	50	20
CS327	Mini Project	-	-	2	01	-	-	-	IOE	50	20
	Total	19	02	08	25	-	500	-	-	300	-
Audit Course											
HS321	Introduction to Foreign Language	02	-	-	-	-	-	-	-	-	-

Total Credits: 25

Total Contact Hours/Week: 31hrs

Note:

#: Minimum 40% marks must be secured in SEE to pass that head.

Department of Technology, Shivaji University, Kolhapur, Maharashtra State, India

* Students are expected to do self study for two hours as per the guidance given by the project guide hence contact hours to be taken as two for the calculation of contact hours.

Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

CIE –Mid Semester Evaluation, SEE – Semester End Examination,
IPE – Internal Practical Evaluation, EPE–External Practical Examination,
IOE– Internal Oral Evaluation, EOE–External Oral Examination

Equivalence of Third Year B.Tech(Computer Science and Technology) Semester V and VI

The above detailed syllabus is a revised version of the Third Year B. Tech (**Computer Science and Technology**) Program being conducted by the Shivaji University at the Technology Department of the University. This syllabus is to be implemented from June 2022, (Academic year 2022-23). The prime feature of this revision is the transformation of the existing curriculum into the Outcome based curriculum as specified in NBA rules and regulations.

The Equivalence for the subjects/courses of **Computer Science and Technology** at Third Year B Tech Semester V and VI pre-revised Program under the faculty of Engineering and Technology is as follows.

Third Year B. Tech Semester V(Computer Science and Technology)

Sr.No	Third Year B.Tech(Computer Science and Technology) Semester V Pre-revised syllabus	Third Year B.Tech(Computer Science and Technology) Semester V Revised syllabus	Remark
1.	System Programming	System Programming	No change in the Course content
2.	Computer Algorithms	Design and Analysis of Algorithm	Course Name Changed Slight modification in the content
3.	Operating System-I	Operating System	Course Name Changed No change in the Course content
4.	Software Engineering	Machine Learning	Software Engineering Shifted to Semester-IV Machine Learning new Course introduced
5.	Computer Graphics and Multimedia Techniques	Database Engineering	Computer Graphics and Multimedia Techniques shifted to Semester- VI
6.	System Programming Lab	Free Open Source Software Lab	Free Open Source Software Lab introduced in place of System Programming Lab
7.	Computer Graphics and Multimedia Techniques Lab	Database Engineering Lab	Computer Graphics and Multimedia Techniques Lab shifted to Semester- VI
8.	Java Programming Lab	Java Programming Lab	No change in the Course content
9.	Seminar	Seminar	No change in the Course content
10.	Internship- I	Internship- I	No change in the Course content
11.	Research Methodology	Research Methodology	No change in Audit Course

Third Year B. Tech Semester VI (Computer Science and Technology)

Sr.No.	Third Year B Tech(Computer Science and Technology) Semester VI Pre-revised syllabus	Third Year B.Tech.(Computer Science and Technology Semester VI Revised syllabus	Remark
1.	Compiler Construction	Compiler Construction	No change in the Course content
2.	Operating System- II	Advanced Operating System	Course Name Changed No change in the Course content
3.	Object Oriented Modeling and Design	Object Oriented Modeling and Design	No change in the Course content
4.	Database Engineering	Computer Graphics and Multimedia Techniques	Database Engineering shifted to Semester- V
5.	Engineering Economics	Engineering Economics	No change in the Course content
6.	Object Oriented Modeling and Design Lab	Object Oriented Modeling and Design Lab	No change in the Course content
7.	Database Engineering Lab	Computer Graphics and Multimedia Techniques Lab	Database Engineering Lab shifted to Semester- V
8.	Advanced Programming Lab	Advanced Programming Lab	No change in the Course content
9.	Mini Project	Mini Project	No change in the Course content
10.	Introduction to Foreign Language	Introduction to Foreign Language	No change in the Course content

For above Theory Courses 1 to 5 the Mid Semester Evaluation pattern is given below.

	CIE = 50 (UT I = 20, UT II = 20, Course work* =10)	CIE = 30 (CIE= 20, Course work =10)	CIE marks distribution.
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Audit course have not been assigned any credits. The students will be evaluated for these courses by the concerned course in charge. There will be grade conferred to the student. The grade will be based on conversion of marks obtained out of 50. (Obtaining passing grade is essential). Please refer to chart in the detail examination scheme. The chart shows the marks range and the respective grade.

***Course work:** It consists of assignments, quiz, seminars, presentations, research papers and research articles, developing working models, surveys and activities related to course as designed by the course coordinator to suit the needs of the course and to complement programme outcomes. The practical work and its journal is not part of course work.



DEPARTMENT OF TECHNOLOGY
FINAL YEAR B.TECH
 Scheme of Teaching and Examination
 Semester – VII (Computer Science and Technology)

To be implemented from Academic Year 2023-24

Course code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
		L	T	P	Credits	Theory			Practical		
						Scheme	Max. marks	Min. Passing	Scheme	Max. marks	Min. Passing
CS411	High Performance Computing	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS412	Advanced Database Management System	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS413	Distributed and Cloud Computing	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS414	Advanced Network Engineering	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS415	Elective-1	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS414L	Advanced Network Engineering Lab	-	-	2	01	-	-	-	EPE	50	20
CS416L	Web Technology Lab-1	2	-	4	04	-	-	-	IPE	50	20
									EPE	50	20
CS417L	Major Project Phase - I	-	-	2	02	-	-	-	IPE	50	20
									EPE	50	20
CS418	Internship-II	-	-	-	01	-	-	-	IOE	50	20
	Total	17	02	08	25	-	500	-	-	300	-
Audit Course											
HS411	Professional Ethics	02	-	-	-	Institute Level	-	-	-	-	-

Total Credits: 25

Total Contact Hours/Week: 29hrs

Note:

1. Minimum 40% marks must be secured in SEE to pass that head.
2. Students are expected to do self-study for two hours as per the guide hence contact hours to be taken as two for the calculation of contact hours.
3. Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

CIE –Mid Semester Evaluation, SEE – Semester End Examination,
 IPE – Internal Practical Evaluation, EPE–External Practical Examination,
 IOE– Internal Oral Evaluation, EOE–External Oral Examination

Note on Electives:

A particular elective will be offered when at least 20 students opt for it.

Note on Open Elective:

In order to promote interdisciplinary study department can offer open electives to students. This elective will be offered from the electives of other branches, particularly available in Sem. VII only. Students shall attend the theory lectures as per schedule of respective branch.

Department of Technology, Shivaji University, Kolhapur, Maharashtra State, India



DEPARTMENT OF TECHNOLOGY
FINAL YEAR B.TECH

Scheme of Teaching and Examination
Semester – VIII (Computer Science and Technology)

To be implemented from Academic Year 2023-24

Course code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
		L	T	P	Credits	Theory			Practical		
						Scheme	Max. marks	Min. Passing	Scheme	Max. marks	Min. Passing
CS421	Mobile Computing	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS422	Information Security	3	1	-	04	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS423	Soft Computing	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS424	Elective-2	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS425	Elective- 3(Open Elective)	3	-	-	03	CIE	30	40	-	-	-
						SEE	70		-	-	-
CS423L	Soft Computing Lab	-	-	2	01	-	-	-	IPE	50	20
						-	-	-	EPE	50	20
CS426L	Web Technology Lab-2	2	-	4	04	-	-	-	IPE	50	20
						-	-	-	EPE	50	20
CS427L	Major Project Phase – II	-	-	4	04	-	-	-	IPE	50	20
						-	-	-	EPE	50	20
	Total	17	1	10	25		500			300	
Audit Course											
HS421	Constitution of India	02	-	-	-	Institute Level	-	-	-	-	-

Total Credits: 25

Total Contact Hours/Week: 30hrs

Note:

1. Minimum 40% marks must be secured in SEE to pass that head.
 2. Students are expected to do self-study for two hours as per the guidance given by the project guide hence contact hours to be taken as two for the calculation of contact hours.
 3. Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.
- CIE –Mid Semester Evaluation, SEE – Semester End Examination,
IPE – Internal Practical Evaluation, EPE–External Practical Examination,
IOE– Internal Oral Evaluation, EOE–External Oral Examination

Note on Electives:

A particular elective will be offered when at least 20 students opt for it.

Note on Open Elective:

In order to promote interdisciplinary study department can offer open electives to students. This elective will be offered from the electives of other branches, particularly available in Sem. VIII only. Students shall attend the theory lectures as per schedule of respective branch.

List of Proposed Electives for final Year B. Tech**ELECTIVE-I, ELECTIVE-II and ELECTIVE-III Courses**

Elective-1 (CS415)
1. Data Science
2. Internet of Things
3. Project Management
Elective-2 (CS424)
1. Big Data Technology
2. Data Mining and Warehousing
3. Image Processing
4. Service Oriented Architecture
Elective-3 (Open Elective) (CS425)
1. Cyber Laws
2. IT for Engineers
3. E-Commerce

Equivalence of Final Year B.Tech(Computer Science and Technology) Semester VII and VIII

The above detailed syllabus is a revised version of the Final Year B. Tech (**Computer Science and Technology**) Program being conducted by the Shivaji University at the Technology Department of the University. This syllabus is to be implemented from June 2023, (Academic year 2023-24). The prime feature of this revision is the transformation of the existing curriculum into the Outcome based curriculum as specified in NBA rules and regulations.

The Equivalence for the subjects/courses of **Computer Science and Technology** at Final Year B Tech Semester VII and VIII pre-revised course under the faculty of Engineering and Technology is as follows.

Final Year B Tech Semester VII (Computer Science and Technology)

Sr. No.	Final Year B. Tech (Computer Science and Technology) Semester VII Pre-revised syllabus	Final Year B. Tech (Computer Science and Technology) Semester VII Revised syllabus(For Credit System)	Remark
1	Advanced Computer Architecture	High Performance Computing	Course Name Changed Slight modification in the content
2	Advanced Database Management System	Advanced Database Management System	No change in the Course content
3	Distributed Systems	Distributed and Cloud Computing	Course Name Changed Slight modification in the content
4	Network Engineering	Advanced Network Engineering	Course Name Changed Slight modification in the content
5	Elective-I Project Management	Elective-I Project Management	No change in the Course content
6	Elective-I Cyber Laws	-----	Shifted to Sem-VIII
7	Elective-I Internet of Things	Elective-I Internet of Things	No change in the Course content
8	-----	Elective-I Data Science	New Elective Course Introduced
9	Network Engineering Lab	Advanced Network Engineering Lab	Course Name Changed Slight modification in the content
10	Web Technology Lab-1	Web Technology Lab-1	No change in the Course content
11	Major Project Phase-I	Major Project Phase-I	No change in the Course content
12	Internship – II	Internship - II	No change in the Course content
13	Professional Ethics	Professional Ethics	No change in the Course content

Final Year B Tech Semester VIII (Computer Science and Technology)

Sr. No.	Final Year B. Tech (Computer Science and Technology) Semester VIII Pre-revised syllabus	Final Year B. Tech (Computer Science and Technology) Semester VIII Revised syllabus(For Credit System)	Remarks
1.	Mobile Technology	Mobile Computing	Course Name Changed Slight modification in the content
2.	Information Security	Information Security	No change in the Course content
3.	Soft Computing	Soft Computing	No change in the Course content
4.	Elective-2 Big Data Technology	Elective-2 Big Data Technology	No change in the Course content
5.	Elective-2 Data Mining and Warehousing	Elective-2 Data Mining and Warehousing	No change in the Course content
6.	Elective-2 Service Oriented Architecture	Elective-2 Service Oriented Architecture	No change in the Course content
7.	-----	Elective-2 Image Processing	New Elective introduced
8.	Elective-3 Industrial Management	-----	Elective removed from Open Elective
9.	Elective-3 Real Time Operating System	-----	Elective removed from Open Elective
10.	Elective-3 Optimization Techniques	-----	Elective removed from Open Elective
11.	-----	Elective-3(Open Elective) Cyber Laws	New Elective introduced
12.	-----	Elective-3(Open Elective) IT for Engineers	New Elective introduced
13.	-----	Elective-3(Open Elective) E-Commerce	New Elective introduced
14.	Soft Computing Lab	Soft Computing Lab	No change in the Course content
15.	Web Technology Lab-2	Web Technology Lab-2	No change in the Course content
16.	Major Project Phase-II	Major Project Phase-II	No change in the Course content
17.	Constitution of India	Constitution of India	No change in the Course content

Audit course have not been assigned any credits. The students will be evaluated for these courses by the concerned course in charge. There will be grade conferred to the student. The grade will be based on conversion of marks obtained out of 50. (Obtaining passing grade is essential). Please refer to chart in the detail examination scheme. The chart shows the marks range and the respective grade.

***Course work:** It consists of assignments, quiz, seminars, presentations, research papers and research articles, developing working models, surveys and activities related to course as designed by the course coordinator to suit the needs of the course and to complement programme outcomes. The practical work and its journal is not part of course work.