

**Shivaji University**  
**Vidya Nagar, Kolhapur, Maharashtra 416004**

**Department of Technology**



**As per NEP2020 guidelines**  
**First Year B.Tech (Computer Science and Technology)**  
**2023-24 onwards**

F.Y to Final Year [B.Tech(Computer Science and Technology)] Curriculum structure w.e.f. 2023-24 and onwards.

A. Definition of Credit:

1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
1 Hr. Practical (P) per week	0.5 credits
2 Hr. Practical(Lab)/week	1 credit

B. Credits for award of Degrees –

- A total of credits **160** for a student are required to be eligible to get **Under Graduate degree in Engineering (Major)**.
- A student will be eligible to get Under Graduate degree with **additional Minor Engineering**, if he/she completes an **additional 16 credits**. These could be acquired by completing the respective courses from the pool launched by the respective Program. (The courses could be through MOOCs also)
- A student will be eligible to get Under Graduate degree with **Honours**, if he/she completes an **additional 12 credits**. These could be acquired preferably through MOOCs the title of which will be well declared to the aspirants who will chose the same from the pool of courses.
- A student will be eligible to get **Under Graduate degree with Honours and Research**, if he/she completes an **additional of 17 credits comprising of 5 credits assigned to additional research project**. (These 12 credits could be acquired preferably through MOOCs. As regards additional project work, it is mandatory to be successful in publishing at least two research papers based on the research topic.)

C. Structure of Undergraduate Engineering Program: -

Sr. No.	Category Suggested	Course Code	Breakup of Credits (Total 160) As per AICTE Model	Our status
1.	Humanities and Social Sciences including Management & Environment Courses	HSMEC	12	06
2.	Basic Science courses	BSC	25	29
3.	Engineering Science Courses including workshop, drawing, basics of electrical/mechanical/computer etc.	ESC	24	30
4.	Professional Core Courses	PCC	48	59
5.	Professional Elective Courses relevant to chosen specialization/branch	PEC	18	06
6.	Open subjects – Electives from other technical and /or emerging subjects	OEC	18	12
7.	Project , Seminar and Internship	PSI	15	16

F.Y to Final Year [B.Tech(Computer Science and Technology)] Curriculum structure w.e.f. 2023-24 and onwards.

8.	Research Skills Courses	RSC	-	02
9.	Project Based Learning	PBL	Non Credit	More than adequate courses covered here
10.	Mandatory Audit Courses [Social, Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Traditional Knowledge]	MAC	Non Credit	
	Total		160	160

#### D. Course code and Definitions: -

Course code	Definitions
L	Lecture
T	Tutorial
P	Practical
ISE	In Semester Examination
ESE	End Semester Examination
IE	Internal Evaluation
EE	External Evaluation
BSC	Basic Science Courses
ESC	Engineering Science Courses
HSMEC	Humanities and Social Sciences including Management , Environmental Courses
PCC	Professional Core Courses
PEC	Professional Elective Courses
OEC	Open Elective Courses
MAC	Mandatory Audit Courses
PSI	Project, Seminar, Internship
PBL	Project Based Learning
RSC	Research Skills Courses
PBL, PBI	Project Based Learning Program Based Internship
MN , HN, HNR	Minor , Honour, Honour with Research
CC, DC	Certificate Course, Diploma Course

#### Mandatory Induction Program at FY B. Tech First Term Commencement

##### 3 Weeks Duration

- Physical activity
- Creative Arts
- Universal Human Values
- Literary
- Proficiency Modules
- Lectures by Eminent People
- Visits to local Areas
- Familiarization to Dept./Branch & Innovations



## Shivaji University, Kolhapur Department of Technology

### First Year B.Tech (Computer Science and Technology), Semester- I

#### Physics Group : Teaching & Evaluation Scheme

S.N.	Category	Course Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				<b>L</b>	<b>T</b>	<b>P</b>			<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Basic Science Course	BSC111	Engineering Physics	03	-	02	05	04	30:70	50:00
2.	Basic Science course	BSC112	Engineering Mathematics –I	03	01	-	04	04	30:70	50:00
3.	Engineering Science Courses	ESC111	Elements of Mechanical and Electronics Engineering	04	-	02	06	05	30:70	100:00
4.	Engineering Science Courses	ESC112	Engineering Mechanics	03	-	02	05	04	30:70	50:00
5.	Engineering Science Course	ESC113	Computer Programming for Engineers	02	-	02	03	03	30:70	50:00
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
6.	Humanities & Social Sciences, Management, Environment Courses	HSMEC 111	Professional Communication (English)-I	02	-	-	02	ISE at Course in charge end		
7.	Research Skills Courses	RSC111	*Design Thinking and Innovation-I and Social Internship	01	-	01	02	ISE at Course in charge end		
8.	Mandatory Audit Course	MAC111	Yoga and Meditation	01	-	-	01	ISE at Course in charge end		
<b>Total Hours</b>				<b>19</b>	<b>01</b>	<b>09</b>	<b>29</b>	-	-	-

\*Design Thinking and Innovation-I and Social Internship: After the First Semester of F.Y. B. Tech, the students will undergo social rural internship of two weeks and the evaluation will be done in the Second Semester.



## Shivaji University, Kolhapur Department of Technology

### First Year B.Tech (Computer Science and Technology), Semester- I

#### Chemistry Group : Teaching & Evaluation Scheme

S.N.	Category	Course Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				L	T	P			ISE:ESE	IE:EE
1.	Basic Science Course	BSC111	Engineering Chemistry	03	-	02	05	04	30:70	50:00
2.	Basic Science Course	BSC112	Engineering Mathematics –I	03	01	-	04	04	30:70	50:00
3.	Engineering Science Course	ESC111	Elements of Civil and Electrical Engineering	04	-	02	06	05	30:70	100:00
4.	Engineering Science Course	ESC112	Engineering Graphics and Design	03	-	02	05	04	30:70	50:00
5.	Engineering Science Course	ESC113	Electrical & Electronic Components and Devices	02	-	02	04	03	30:70	50:00
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
6.	Humanities & Social Sciences, Management, Environment Courses	HSMEC 111	Professional Communication (English)-I	02	-	-	02	ISE at Course in charge end		
7.	Research Skills Course	RSC111	*Design Thinking and Innovation-I and Social Internship	01	-	01	02	ISE at Course in charge end		
8.	Mandatory Audit Course	MAC111	Yoga and Meditation	01	-	-	01	ISE at Course in charge end		
<b>Total Hours</b>				<b>19</b>	<b>01</b>	<b>09</b>	<b>29</b>	<b>-</b>	<b>-</b>	<b>-</b>

\*Design Thinking and Innovation-I and Social Internship: After the First Semester of F.Y. B. Tech, the students will undergo social rural internship of two weeks and the evaluation will be done in the Second Semester.



## Shivaji University, Kolhapur Department of Technology

### First Year B.Tech (Computer Science and Technology), Semester- II

#### Physics Group, Teaching & Evaluation Scheme

S. N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				<b>L</b>	<b>T</b>	<b>P</b>			<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Basic Science Course	BSC121	Engineering Chemistry	03	-	02	05	04	30:70	50:00
2.	Basic Science Course	BSC122	Engineering Mathematics – II	03	01	-	04	04	30:70	50:00
3.	Engineering Science Course	ESC121	Elements of Civil and Electrical Engineering	04	-	02	06	05	30:70	100:00
4.	Engineering Science Course	ESC122	Engineering Graphics and Design	03	-	02	05	04	30:70	50:00
5.	Engineering Science Course	ESC123	Electrical & Electronic Components and Devices	02	-	02	04	03	30:70	50:00
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
6.	Humanities & Social Sciences, Management, Environment Courses	HSMEC 121	Professional Communication (English)-II	02	-	-	02		ISE at Course in charge end	
7.	Research Skills Course	RSC121	Design Thinking & Innovation-II	01	-	01	02		ISE at Course in charge end	
8.	Mandatory Audit Course	MAC121	Human Rights and Constitution	01	-	-	01		ISE at Course in charge end	
			<b>Total Hours</b>	<b>17</b>	<b>01</b>	<b>09</b>	<b>29</b>	<b>-</b>	<b>-</b>	<b>-</b>



## Shivaji University, Kolhapur Department of Technology

### First Year B.Tech (Computer Science and Technology), Semester- II

#### Chemistry Group : Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
									<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Basic Science Course	BSC121	Engineering Physics	03	-	02	05	04	30:70	50:00
2.	Basic Science Course	BSC122	Engineering Mathematics – II	03	01	-	04	04	30:70	50:00
3.	Engineering Science Course	ESC121	Elements of Mechanical and Electronics Engineering	04	-	02	06	05	30:70	100:00
4.	Engineering Science Course	ESC122	Engineering Mechanics	03	-	02	05	04	30:70	50:00
5.	Engineering Science Course	ESC123	Computer Programming for Engineers	02	-	02	04	03	30:70	50:00
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
6.	Humanities & Social Sciences, Management, Environment Course	HSMEC 121	Professional Communication (English)-II	02	-	-	02		ISE at Course in charge end	
7.	Research Skills Course	RSC121	Design Thinking and Innovation-II	01	-	01	02		ISE at Course in charge end	
8.	Mandatory Audit Course	MAC121	Human Rights and Constitution	01	-	-	01		ISE at Course in charge end	
			<b>Total Hours</b>	19	01	09	<b>29</b>	-	-	-



## Shivaji University, Kolhapur Department of Technology

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

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
									<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Basic Science Course	BSC 211	Applied Mathematics- I (Probability and Statistics)	03	01	00	04	04	30:70	50:00
2.	Professional Core Courses	PCC211	Discrete Mathematical Structure	03	-	00	03	03	30:70	00:00
3.	Professional Core Courses	PCC212	Digital System and Microprocessor	03	-	02	05	04	30:70	50:50
4.	Professional Core Courses	PCC213	Data Structures	03	-	04	07	05	30:70	50:50
5.	Professional Core Courses	PCC214	Data Communication and Networking	03	-	02	05	04	30:70	00:50
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
6.	Mandatory Audit Course	MAC211	Soft Skills Development	02	-	-	02	ISE at Course in charge end		
7.	Project Based Learning	PBL211	Mini Project I	-	01	-	01	ISE at Course in charge end		
8.	Humanities, Social Sciences, Management, Environment	HSMEC 211	Environmental Studies	02	-	-	02	University Exam at year end		
			<b>Total Hours</b>	19	01	08	<b>28</b>	-	-	-





## Shivaji University, Kolhapur Department of Technology

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

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				<b>L</b>	<b>T</b>	<b>P</b>			<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Basic Science Courses	BSC 221	Applied Mathematics- II	03	-	-	03	03	30:70	00:00
2.	Professional Core Courses	PCC221	Theory of Computation	03	-	-	03	03	30:70	00:00
3.	Professional Core Course	PCC 222	Advanced Microprocessor	03	-	02	05	04	30:70	50:50
4.	Professional Core Course	PCC 223	Computer Organization	03	-	-	03	03	30:70	00:00
5.	Professional Core Course	PCC 224	Software Engineering	03	-	-	03	03	30:70	00:00
6.	Professional Core Course	PCC 225	Linux and Shell Programming	-	-	02	02	01	00:00	50:50
7.	Professional Core Course	PCC 226	Object Oriented Programming Lab	01	-	04	05	03	00:00	50:50
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
8.	Mandatory Audit Course	MAC221	Introduction to Performing Arts	01	-	-	01		ISE at Course in charge end	
9.	Mandatory Audit Course	MAC 222	Aptitude Enhancement Course I	-	01	-	01		ISE at Course in charge end	
10.	Project Based Learning	PBL221	Mini Project II	-	01	-	01		ISE at Course in charge end	
11.	Humanities, Social Sciences, Management Environment	HSMEC 221	Environmental Studies	02	-	-	02		University Exam at year end	
			<b>Total Hours</b>	<b>19</b>	<b>02</b>	<b>08</b>	<b>29</b>	<b>-</b>	<b>-</b>	<b>-</b>



## Shivaji University, Kolhapur Department of Technology

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

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
									<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Professional Core Courses	PCC311	System Programming	03	-	-	03	03	30:70	00:00
2.	Professional Core Courses	PCC312	Design and Analysis of Algorithm	03	-	-	03	03	30:70	00:00
3.	Professional Core Courses	PCC313	Operating System	03	-	-	03	03	30:70	00:00
4.	Professional Core Courses	PCC314	Database Engineering	03	-	02	05	04	30:70	50:50
5.	Professional Core Course	PCC315	Machine Learning	03	-	-	03	03	30:70	00:00
6.	Professional Core Course	PCC316	Java Programming Lab	-	-	04	04	02	00:00	50:50
7.	Professional Core Course	PCC317	Free Open Source Software Lab	-	-	02	02	01	00:00	00:50
8.	Project Based Learning	PBL311	Seminar	-	-	02	02	01	00:00	50:00
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
9.	Mandatory Audit Course	MAC311	Introduction to Foreign Language	01	-	-	01	ISE at Course in charge end		
10.	Mandatory Audit Course	MAC312	Aptitude Enhancement Course II		01	-	01	ISE at Course in charge end		
			<b>Total Hours</b>	16	03	08	<b>27</b>	-	-	-



## Shivaji University, Kolhapur Department of Technology

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

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
									<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Professional Core Courses	PCC 321	Compiler Construction	03	-	-	03	03	30:70	00:00
2.	Professional Core Course	PCC322	Computer Graphics and Multimedia Techniques	03	-	02	05	04	30:70	50:50
3.	Professional Core Course	PCC323	Distributed and Cloud Computing	03	01	-	04	04	30:70	50:00
4.	Professional Elective Course	PEC321	Elective- I(Mobile Computing/OOMD)	03	-	-	03	03	30:70	00:00
5.	Open Elective Course	OEC 321	Open Elective –I (Basics of SE/Introduction to CN/Introduction to DBE/EE)	03	-	-	03	03	30:70	00:00
6.	Professional Elective Course	PCC324	Advanced Programming Lab	01	-	02	03	02	00:00	50:50
7.	Project Based Learning	PBL321	Mini Project -III	-	-	02	02	01	00:00	50:00
				-	-	-	-	<b>20</b>	<b>500</b>	<b>300</b>
7.	Mandatory Audit Course	MAC321	Design Thinking & Innovation - III	01	-	-	01	ISE at Course in charge end		
8.	Mandatory Audit Course	MAC 322	Aptitude Enhancement Course III	-	01	-	01	ISE at Course in charge end		
			<b>Total Hours</b>	17	02	06	<b>25</b>	-	-	-



## Shivaji University, Kolhapur Department of Technology

### Final Year B.Tech (Computer Science and Technology), Semester- VII

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				<b>L</b>	<b>T</b>	<b>P</b>			<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Program Core Course	PCC411	High Performance Computing	03	-	-	03	03	30:70	00:00
2.	Program Core Course	PCC412	Soft Computing	03	-	02	05	04	30:70	50:50
3.	Program Core Course	PCC413	Advanced Database Management	03	-	-	03	03	30:70	00:00
4.	Program Elective Course	PEC 411	Elective II (ANE/PM/IS)	03	-	-	03	03	30:70	00:00
5.	Open Elective Course	OEC 411	Open Elective- II (Cyber Laws/Ecommerce/IT for Engineers)	03	-	-	03	03	30:70	00:00
6.	Program Core Course	PCC414	Web Technology Lab	01	-	02	03	02	00:00	50:50
7.	Project Based Learning	PSI 411	Major Project-I	-	-	04	04	02	00:00	50:50
							<b>-</b>	<b>20</b>	<b>500</b>	<b>300</b>
8.	Mandatory Audit Course	MAC411	Green Technology & Sustainability	01	-	-	01	ISE at Course in charge end		
			<b>Total Hours</b>	17	00	08	25	-	-	-



## Shivaji University, Kolhapur Department of Technology

### Final Year B.Tech (Computer Science and Technology), Semester- VIII

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
									<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Project Seminar Internship	PSI 421	Industrial Internship (Follow up by the Department)	Entire Semester to be spent in industry				10	00:00	100:100
2.	Open Elective Course [SWAYAM (NPTEL) or any other MOOCs]	OEC 421	Open Elective –III Preferably on MOOC*( DL/DM)	03	-	-	03	03	30:70	50:00
3.		OEC 422	Open Elective –IV Preferably on MOOC *(Data Science/ Big Data Technology/Search Engine and Optimization)	03	-	-	03	03	30:70	50:00
4.	Project Seminar Internship	PSI 423	Seminar	-	02	-	02	02	00:00	100:00
5.		PSI 424	Major Project-II	01	-	02	03	02	30:70	100:00
				-	-	-	-	<b>20</b>	<b>300</b>	<b>500</b>
6.	Mandatory Audit Course	MAC421	MOOC III (Professional Ethics)	02	-	-	02	ISE at Course in charge end		
<b>Total Hours (Other than Internship)</b>				<b>09</b>	<b>02</b>	<b>02</b>	<b>13</b>	-	-	-

\*There is an option for End Semester Examination either on respective MOOC platform or at the course teacher’s end through the University System.



## Shivaji University, Kolhapur Department of Technology

### B.Tech (Computer Science and Technology), Minor Degree

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				<b>L</b>	<b>T</b>	<b>P</b>			<b>ISE:ESE</b>	<b>IE:EE</b>
1.	Preferably on SWAYAM (NPTEL) or any other MOOCs (Minor Program Core) Or In a Face-to-Face mode	MN-1	MN-Minor I	03	-	-	03	03	30:70	00:00
2.		MN-2	MN-Minor II	03	-	-	03	03	30:70	00:00
3.		MN-3	MN-Minor III	03	-	-	03	03	30:70	00:00
4.		MN-4	MN-Minor IV	03	-	-	03	03	30:70	00:00
5.	Minor Program Based Internship	MN-PBI	Industrial Internship (Minor Program Specific Industry)	One Month				04	00:00	50:50
							-	<b>16</b>	<b>400</b>	<b>100</b>
			<b>Total Hours</b>	12	00	00	<b>12</b>	-	-	-

*Note: The workload against the B.Tech Minors will be finalized at the Program Level considering the strength of students opting for the Minor.*

Credits for B. Tech (Minor) will be over and above the credits 160 required for the B. Tech (Major)  
A minimum of 10 students need to opt for the particular specialization. Specializations available are:

1. B. Tech (Artificial Intelligence and Machine Learning)
2. B. Tech (Cyber Security)
3. B, Tech (Data Science)
4. B. Tech (Internet of Things)

Note1: The Program will have pool of the courses (Either Conventional or the MOOCs) from which the aspirants will choose these four courses and they may complete the same starting from Second Year till their departure from Final Year Computer Science and Technology UG)



## Shivaji University, Kolhapur Department of Technology

### B.Tech (Computer Science and Technology), Honours

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				L	T	P			ISE:ESE	IE:EE
1.	SWAYAM (NPTEL) or any other MOOCs (Program Core Courses) Or Self-study mode with University's Semester End Examination	HN- 1	HN-Course I	03	-	-	03	03	30:70	00:00
2.		HN- 2	HN- Course II	03	-	-	03	03	30:70	00:00
3.		HN- 3	HN- Course III	03	-	-	03	03	30:70	00:00
4.		HN- 4	HN- Course IV	03	-	-	03	03	30:70	00:00
				-	-	-	-	12	500	00
			<b>Total Hours</b>	12	00	00	12	-	-	-

**Note: The workload against the B.Tech Honours will be finalized at the Program Level considering the strength of students opting for the Honours.**

Note1: The Program will have declaration of pool for these courses either through MOOCs' or from a conventional list for self-studies. From this pool, the aspirants will choose the courses.

Note2: These courses / MOOCs will be different than those to be opted in the VIII semester of B. Tech Major.

Note 3: B. Tech (Honours) will be eligible to join the Second Year of PG program in the same specialisation.

Note 4: Students may complete these courses/MOOCs when they enter in FY B. Tech and they may complete the same before their departure.



## Shivaji University, Kolhapur Department of Technology

### B.Tech (Computer Science and Technology), Honours with Research

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
				<b>L</b>	<b>T</b>	<b>P</b>			<b>ISE:ESE</b>	<b>IE:EE</b>
1.	SWAYAM (NPTEL) or any other MOOCs (Program Core Courses) Or Self-study mode with University's Semester End Examination	HNR- 1	HNR -Course I	03	-	-	03	03	30:70	00:00
2.		HNR – 2	HNR - Course II	03	-	-	03	03	30:70	00:00
3.		HNR – 3	HNR - Course III	03	-	-	03	03	30:70	00:00
4.		HNR – 4	HNR - Course IV	03	-	-	03	03	30:70	00:00
6.	Project Based Learning	HNR –PBL	*Additional Research Project	-	-	10	10	05	00:00	100:100
				-	-	-	-	<b>17</b>	<b>400</b>	<b>100</b>
			<b>Total Hours</b>	<b>12</b>	<b>-</b>	<b>10</b>	<b>22</b>	<b>-</b>	<b>-</b>	<b>-</b>

*Note: The workload against the B.Tech Honours with Research will be finalized at the Program Level considering the strength of students opting for the Honours with Research.*

**\*Research Project to be treated successful upon publishing of minimum two research papers in reputed Research Journals.**

Note1: The Program will have declaration pool of these courses/MOOCs from which the aspirants will choose the courses/MOOCs.

Note2: These courses or MOOCs will be different than those to be opted in the VIII semester of B. Tech Major.

Note 3: A successful B. Tech (Honours with Research) will be eligible to get enrolled to PhD in same or allied field.

Note 4: Students may complete these courses/MOOCs when they enter in FY B.Tech and they may complete the same before their departure.





## Shivaji University, Kolhapur Department of Technology

### B.Tech (Computer Science and Technology), Exit After First Year (Certificate Course in Computer Science and Technology)

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
1.	SWAYAM (NPTEL) or any other MOOCs Or any other course from in face to face mode (Program Core Courses)	CC-MOOC 1	CC-MOOC I **	02	-	-	02	02	ISE:ESE	IE:EE
2.		CC-MOOC 2	CC-MOOC II**	02	-	-	02	02	30:70	00:00
3.	Program Based Internship	CC-PBI	Industrial Internship	One Month				06	00:00	50:50
				-	-	-	-	10*	200	100
			<b>Total Hours</b>	<b>04</b>	<b>-</b>	<b>-</b>	<b>04</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Note: The Workload against the Certificate Course will be finalised at the Program Level considering the strength of the students seeking for the Certificate.**

**\*Obtaining these credits will be in addition to 40 regular credits at FY B. Tech**

\*\*There is an option for End Semester Examination either on respective MOOC platform or at the course teacher's end through the University System.

Note 1: The students aspiring to exit after first year will finalise the title of the course/MOOC from the list provided by the Program.

Note 2: Program Specific Industry Internship to be completed by such students before commencement of SY B. Tech.



## Shivaji University, Kolhapur Department of Technology

### B.Tech (Computer Science and Technology), Exit After Second Year (Diploma in Computer Science and Technology)

#### Teaching & Evaluation Scheme

S.N.	Category	Code	Course Title	Hours per week			Contact Hours	Credits	Evaluation scheme	
				L	T	P			Theory	Practical
									<b>ISE:ESE</b>	<b>IE:EE</b>
1.	SWAYAM (NPTEL) or any other MOOCs Or any other course from in face to face mode (Program Core Courses)	DC-MOOC 1	DC-MOOC I **	03	-	-	03	03	30:70	00:00
2.		DC-MOOC 2	DC-MOOC II**	03	-	-	03	03	30:70	00:00
3.		DC-MOOC 3	DC-MOOC III**	03	-	-	03	03	30:70	00:00
4.	Program Based Internship	DC-PBI	One Month Industrial Internship	-	-	-	-	06	00:00	50:50
				-	-	-	-	<b>15*</b>	<b>300</b>	<b>100</b>
			<b>Total Hours</b>	<b>09</b>	<b>-</b>	<b>-</b>	<b>09</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Note: The Workload against the Diploma Course will be finalised at the Program Level considering the strength of the students seeking for the Diploma.**

**\*Obtaining these credits will be in addition to 80 regular credits up to SY B. Tech**

\*\* There is an option for End Semester Examination either on respective MOOC platform or at the course teacher's end through the University System.

Note 1: The students aspiring to exit after the second year will finalise the title of the course/MOOC from the list provided by the Program.

Note 2: Program Specific Industry Internship to be completed by such students before commencement of TY B. Tech.

**Salient Feature of the revision which has been made in line with NEP 2020 Guidelines:**

- I. **B.Tech Major:** With completion of the routine no of credits e.g.160 along with those mandatory audit courses in each semester. (Total 8 Semester @ 20 Credits=160 credits. As usual if the graduates want to pursue PG, it will be of 2 years duration for them.
- II. **B. Tech Minors:** There will be at least one option from each Program floated for the minor degree): Additional 16 Credits are mandatory to be completed. (With award of an Additional Degree of the respective Specialization): **A minimum of 10 students to opt for the Minor Degree. The interested students have to pay separate fees for the same.** (Total 16 Credits= 03 Credits x 4 course=12 + 04 Credits against an in plant training of 30 days from the respective sector e. g If its **B. Tech Food Technology, the mandatory training would be from Food Sector.**)
- III. **B. Tech (Honours):** There will be additional 12 Credits obtained through successful completion of 04 MOOCs 3 Credits each. (Other than Compulsory MOOCs of Semester VIII). The MOOCs to be completed throughout four years starting from second year. The interested students have to pay separate fees for the same. Such a candidate will be eligible to enter at the Second Year of PG in the respective specialisation as per NEP 2020 guidelines.
- IV. **B. Tech (Honours with Research):** There will be additional 17 Credits obtained through successful completion out of which 12 credits will be from 04 MOOCs 3 Credits each. (Other than Compulsory MOOCs of Semester VIII). The balance 5 credits will be against an additional Project Work with success in publishing at least two research papers based on the research topic. The interested students have to pay separate fees for the same. Such a candidate will be eligible as per NEP 2020 guidelines for pursuing PhD studies.
- V. **Multiple entry and multiple exit feature:**
  1. **After First year,** anyone desiring exit from first year with a claim to be an awardee of certificate course in respective specialisation, the enrollee has to complete (in addition to the First Year Credits 40 in number), two, '2 credits theory courses' and a skill based 6 credits

course (1 Month Rigorous industrial training). These additional 10 credits to be completed by such aspirants. The details of these courses to be defined by the respective specialisation and designed and well narrated to the aspirants. **The interested students have to pay separate fees for the same.**

2. **After Second Year**, anyone desiring to exit from second year with a claim to be an awardee of Diploma in respective specialisation, the enrollee has to complete (in addition to the First Year and Second Year Credits 80 in number), three, '3 credits theory courses' and a skill based 6 credits course (1 Month Rigorous industrial training). These additional 15 credits to be completed by such aspirants. The details of these courses to be defined by the respective specialisation and designed and well narrated to the aspirants. **The interested students have to pay separate fees for the same.**

**N.B.:** As regards, multiple entries, any student from same specialisation who desires to join at second, third or Final Year has to have accumulation of those minimum numbers credits up to the last year of his entry year in his account.