D. Y. Patil Education Society

(Deemed to Be University)

School of Engineering and Management

KASABA BAWADA, KOLHAPUR

Accredited by NAAC with

‘A++’ Grade

First Year to Final Year B. Tech.

Structure (as per NEP 2020)

Department of Computer Science and Engineering

Revised w. e. f. A. Y. 2024-25

D. Y. Patil Education Society
(Deemed to be University)
D. Y. Patil School of Engineering & Management,
Department of Computer Science & Engineering

Sr. No.	Year	Semester wise Credit Point	
		ODD	EVEN
1	First	22	20
2	Second	22 **(4 Credits ODL)**	22
3	Third	22 **(4 Credits ODL)**	22
4	Fourth	22 **(4 Credits ODL)**	20 **(8 Credits ODL)**
Total Credit points		**88**	**84**
		172 (20 credits ODL)	

		Course Type and Credits																
NCrF/ NHEQF Level	**Sem.**	**BSC**	**ESC**	**PCC**	**PEC**	**OEC**	**VSEC**	**AEC**	**IKS**	**VEC**	**MDM**	**HSSM**	**CCA**	**PR**	**INT**	**CEP/FP**	**RM**	**TOTAL**
4.5	I	8	8	--	--	--	2	--	2	--	--	--	2	--	--	--	--	22
	II	8	4	2	--	--	2	2	--	--	--	--	2	--	--	--	--	20
	EXIT UG CERTIFICATE: 42 + ADDITIONAL 6-8 CREDITS																	
5.0	III	--	--	10	--	4	--	--	--	2	2	2	--	--	--	2	--	22
	IV	--	--	10	--	2	2	2	--	2	2	2	--	--	--	--	--	22
	EXIT UG DIPLOMA 86 + ADDITIONAL 6-8 CREDITS																	
5.5	V	--	--	12	4	2	--	--	--	--	4	--	--	--	--	--	--	22
	VI	--	--	10	8	--	2	--	--	--	2	--	--	--	--	--	--	22
	EXIT B. VOCATIONAL :128 + ADDITIONAL 6-8 CREDITS																	
6.0	VII	--	--	6	6	--	--	--	--	--	2	--	--	4	--	--	4	22
	VIII	--	--	4	2	--	--	--	--	--	2	--	--	--	12	--	--	20
	EXIT B.TECH. IN ..... ENGINEERING 172 CREDITS																	
DYSEM		**16**	**12**	**54**	**20**	**8**	**8**	**4**	**2**	**4**	**14**	**4**	**4**	**4**	**12**	**2**	**4**	**172**
NEP (State GR)		**14-18**	**12-16**	**44-56**	**20**	**8**	**8**	**4**	**2**	**4**	**14**	**4**	**4**	**4**	**12**	**2**	**4**	**160-180**

D Y PATIL EDUCATION SOCIETY Kasba Bawada, Kolhapur KOLHAPUR

Common Guidelines:

1. **For ODL Courses, 2 Contact hrs per week will be given to concerned Faculty Members for 3 or 4 credits and 1 contact hour per 1 or 2 credits**
2. **ODL courses platform is SWAYAM and for 2 credits minimum 8 week courses and for 3/4 credits minimum 12 week courses will be allowed.**
3. **Each semester 2 liberal learning courses should be taken by students – one from institute level and one from department level. Concern course coordinator will do the assessment after the end of each semester and give marks.**

Note:

A) B. Tech. Computer Science & Engineering with Multidisciplinary Minor in Electric Vehicles(172 Credits)

B) B. Tech. Computer Science & Engineering with Multidisciplinary Minor in Electric Vehicles and Honors in Cyber Security. (172 + 18 Credits)

Honors Category	Semester	Credits
Honors-1	IV	04
Honors-2	V	04
Honors-3	VI	04
Honors-4	VII	04
Honors-5	VIII	02

C) B. Tech. Computer Science & Engineering with Multidisciplinary Minor in Electric Vehicles and Honors with Research (172 + 18 Credits).

Semester	Details of work	Credits
VII	2 NPTEL course of FDP level, Research work report	9
VIII	Summer vacation Work	9

D) B.Tech in Engg./ Tech.- with Double Minor (additional 18 credits)

Enrollment and Assessment strategy for B. Tech Honors:

- Students completing F.Y. B. Tech. without any backlog/ Students admitted through lateral entry are eligible to register for B. Tech. (Hons.) program.
- Students having no credit arrears at the time of enrollment are eligible to register for B. Tech. (Hons.) program.
- Proportion of the No. of Students for B. Tech. (Hons.) shall be decided as per admission status at F.Y. Level and lateral entry.
- The Assessment and Evaluation will be done as per curriculum structure.
- For B. Tech (Hons.), a student needs to earn additional 18 credits (over and above the required 172) credits for B. Tech Degree relevant to his/her discipline.
- Only one Makeup Examination will be conducted for the students failing in the End Semester Examination of B. Tech (Hons.) program.

Online Courses Evaluation (*AICTE (Credit Framework for online learning course through SWAYAM) Regulations, 2016*)

- The evaluation should be based on predefined norms and parameters and shall be based on a comprehensive evaluation throughout the length and breadth of course based on specified instruments like discussions, forms, quizzes, assignments, session examinations and final examination.
- Whereas an online examination would be the preferred mode, the Principal Investigator (PI) shall be authorized to decide on the mode of conducting the final examination. This shall be announced in the overview of the Course at the time of offering the course.
- In case, a pen and paper final examination is to be conducted, the same shall be offered through any college/school volunteering to conduct the same. The decision in this respect will be of the PI and the host institution.

D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2024-25 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- I)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE / PoE	
					L	P	T						
1	24CSEU1B01	BSC	Linear Algebra and Calculus	4	3	-	1	20	30	50	25	-	125
2	24CSEU1B02	BSC	Applied Physics	4	3	2	-	20	30	50	25	-	125
3	24CSEU1S03	ESC	Problem Solving through Programming	4	2	4	-	-	-	50	50	50	150
4	24CSEU1S04	ESC	Digital Logic Design	4	3	2	-	20	30	50	25	-	125
5	24CSEU1N05	VSEC	Design Thinking Through Innovation	2	1	2	-	25	-	-	25	-	50
6	24CSEU1K06	IKS	The Outreach of Indian Knowledge System	2	2	-	-	20	30	-	-	-	50
7	24CSEU1C07	CCA	Liberal Learning	2	-	4*	-	-	-	-	50	-	50
8	24CSEU1D08	AC	Finishing School Training I	Audit	3*	-	-	50	-	-	-	-	50
9	24CSEU1I09	INT	Rural/Social Internship	-	-	-	-	50		-	-	-	50
			Total	**22**	**14**	**10**	**1**						**775**

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course



D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2024-25 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- II)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE / PoE	
					L	P	T						
1	24CSEU2B01	BSC	Differential Equations and Numerical Techniques	4	3	-	1	20	30	50	25	-	125
2	24CSEU2B02	BSC	Applied Chemistry	4	3	2	-	20	30	50	25	-	125
3	24CSEU2S03	ESC	Generative AI	4	3	2	-	20	30	50	25	-	125
4	24CSEU2A04	AEC	Professional Communication	2	1	2	-	25	-	-	25	-	50
5	24CSEU2D05	CCA	Liberal Learning	2	-	4*	-	50	-	-	-	-	50
6	24CSEU2P06	PCC	Elementary Data Structures	2	2	-	-	-	-	50	-	-	50
7	24CSEU2N07	VSEC	Python Programming	2	1	2	-	25	-	-	25	-	50
8	24CSEU2PR08	PR	Capstone Project	-	-	-	-	50	-	-	-	-	50
9	24CSEU2D09	INT	Finishing School Training II	-	3*	-	-	50	-	-	-	-	50
			Total	**20**	**13**	**8**	**1**						**675**

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course

D.Y. PATIL EDUCATION SOCIETY
Deemed to be University
Kasba Bawada, Kolhapur
KOLHAPUR

D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2024-25 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- III)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE/ PoE	
					L	P	T						
1	24CSEU3P01	PCC	Discrete Mathematical Structures	**3**	3	-	-	20	30	50	-	-	100
2	24CSEU3P02	PCC	Computer Networks	**3**	3	-	-	20	30	50	-	-	100
3	24CSEU3P03	PCC	Computer Networks Lab	**1**	-	2	-	-	-	-	25	25	50
4	24CSEU3P04	PCC	Data Structures & Algorithms	**3**	2	2	-	-	-	-	50	50	100
5	24CSEU3M06	MDM-I	Software Engineering	**2**	2	-	-	-	-	50	-	-	50
6	24CSEU3O09	OEC-I $	Fundamentals of Object Oriented Programming$	**3**	3	-	-	20	30	50	-	-	100
7	24CSEU3O10	OEC-I $	Fundamentals of Object Oriented Programming Lab $	**1**	-	2	-	-	-	-	25	-	25
8	24CSEU3F05	CEP/FP	Community Engagement Project	**2**	-	4	-	-	-	-	25	25	50
9	24CSEU3V08	VEC	Environmental Studies-I	**2**	2	-	-	-	-	50	-	-	50
10	24CSEU3H10	HSSM	Intellectual Property Rights	**2**	2	-	-	-	-	50	-	-	50
11	24CSEU3D11	AC	Finishing School Training - III	-	2*	-	-	-	-	-	50*	-	
12	24CSEU3C12	AC	Liberal Learning	-	2*	-	-	-	-	-	50*	-	
			Total	**22**	**17**	**10**	**0**						**675**

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course



D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2024-25 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- IV)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE/ PoE	
					L	P	T						
1	24CSEU4P01	PCC	Theory of Computation	**3**	3	-	-	20	30	50	-	-	100
2	24CSEU4P02	PCC	Operating Systems	**3**	3	-	-	20	30	50	-	-	100
	24CSEU4P03	PCC	Operating Systems Lab	**1**	-	2	-	-	-	-	25	25	50
3	24CSEU4P04	PCC	Object Oriented Programming	**3**	2	2	-	-	-	-	50	50	100
4	24CSEU4M05	MDM-II	Software Testing	**2**	2	-	-	--	-	50	-	-	50
5	24CSEU4O06	OEC-II	E-Commerce and Digital Marketing	**2**	2	-	-	-	-	50	-	-	50
6	24CSEU4A07	AEC	Trending Technology Laboratory	**2**	-	4	-	-	-	-	25	25	50
7	24CSEU4N08	VSEC	Web Technology-I	**2**	1	2	-	-	-	-	50	-	50
8	24CSEU4V09	VEC	Environmental Studies-II	**2**	2	-	-	-	-	50	-	-	50
9	24CSEU4H10	HSSM	Project Management Tools and Startup Ventures	**2**	1	2	-	-	-	-	50	-	50
10	24CSEU4D11	AC	Finishing School Training - IV	-	2*	-	-	-	-	-	50*	-	
11	24CSEU4C12	AC	Liberal Learning	-	2*	-	-	-	-	-	50*	-	
			Total	**22**	**16**	**12**	**0**						650

HONORS

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	L	P	T	ISE	MSE	ESE	INT	OE/ PoE	
1	24CSEU4Z01	Honors	Mathematical Foundations for AI/ML	3	3	-	-	20	30	50	-	-	100
2	24CSEU4Z02	Honors	Mathematical Foundations for AI/ML Lab	1	-	2	-	-	-	-	25	-	25
3	24CSEU4Z03	Honors	Fundamentals of Cyber Security	3	3	-	-	20	30	50	-	-	100
4	24CSEU4Z04	Honors	Fundamentals of Cyber Security Lab	1	-	2	-	-	-	-	25	-	25

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course



D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2024-25 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- V)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE/ PoE	
					L	P	T						
1	24CSEU5P01	PCC	Database Engineering	**3**	3	-	-	20	30	50	-	-	100
2	24CSEU5P02	PCC	Database Engineering Lab	**1**	-	2	-	-	-	-	25	25	50
3	24CSEU5P03	PCC	Design and Analysis of Algorithms	**3**	3	-	-	20	30	50	-	-	100
4	24CSEU5P04	PCC	Information Security	**3**	2	2	-	-	-	-	25	25	50
5	24CSEU5P05	PCC	Software Engineering	**2**	2	-	-	20	30	50	-	-	100
6	24CSEU5M06	MDM-III	Test Driven Development	**3**	3	-	-	20	30	50	-	-	100
7	24CSEU5M07	MDM-III	Test Driven Development Lab	**1**	-	2	-	-	-	-	25	-	25
8	24CSEU5E08	PEC-I	Internet of Things	**3**	**3**	-	-	**20**	**30**	**50**	-	-	**100**
9	24CSEU5E09		Computer Graphics and Multimedia Techniques										
10	24CSEU5E10		Introduction to AIML										
11	24CSEU5E11	PEC-I	Internet of Things Lab	**1**	-	**2**	-	-	-	-	**25**	-	**25**
12	24CSEU5E12		Computer Graphics and Multimedia Techniques Lab										
13	24CSEU5E13		Introduction to AIML Lab										
14	24CSEU5O14	OEC-III	Cloud Computing	**2**	2	-	-	-	-	50	-	-	50
15	24CSEU5C15	AC	Liberal Learning	-	2*	-	-	-	-	-	50*	-	
16	24CSEU5D16	AC	Finishing School Training - V	-	3*	-	-	-	-	-	50*	-	
			Total	**22**	**18**	**8**	-						**700**

HONORS

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	L	P	T	ISE	MSE	ESE	INT	OE/	
1	24CSEU5Z01	Honors	Introduction to AI/ML	3	3	-	-	20	30	50	-	-	100
2	24CSEU5Z02	Honors	Introduction to AI/ML	1	-	2	-	-	-	-	25	-	25
3	24CSEU5Z03	Honors	Data Security Systems	3	3	-	-	20	30	50	-	-	100
4	24CSEU5Z04	Honors	Data Security Systems Lab	1	-	2	-	-	-	-	25	-	25

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course
#- Students opted AIML as Honors are not allowed to opt Introduction to AIML (PEC I)



D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2024-25 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- VI)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE/ PoE	
					L	P	T						
1	24CSEU6P01	PCC	System Programming	3	3	-	-	20	30	50	-	-	100
2	24CSEU6P02	PCC	Advanced Database Systems	3	3	-	-	20	30	50	-	-	100
3	24CSEU6P03	PCC	Advanced Database Systems Lab	1	-	2	-	-	-	-	25	25	50
4	24CSEU6P04	PCC	Smart Phone Application Development	3	2	2	-	-	-	-	50	50	100
5	24CSEU6M05	MDM-IV	Web Testing	2	2	-	-	-	-	50	-	-	50
6	24CSEU6E06	PEC-II	Programming Paradigms	3	3	-	-	20	30	50	-	-	100
7	24CSEU6E07		Ethical Hacking										
8	24CSEU6E08		Image Processing										
9	24CSEU6E09	PEC-II	Programming Paradigms Lab	1	-	2	-	-	-	-	25	-	25
10	24CSEU6E10		Ethical Hacking Lab										
11	24CSEU6E11		Image Processing Lab										
12	24CSEU6E12	PEC-III	FOSS Tools	3	3	-	-	20	30	50	-	-	100
13	24CSEU6E13		Blockchain Technology										
14	24CSEU6E14		Augmented Reality/ Virtual Reality										
15	24CSEU6E15	PEC-III	FOSS Tools Lab	1	-	2	-	-	-	-	25	-	25
16	24CSEU6E16		Blockchain Technology Lab										
17	24CSEU6E17		Augmented Reality/ Virtual Reality Lab										
18	24CSEU6N18	VSEC	Web Technology-II	2	1	2	-	-	-	-	25	25	50
19	24CSEU6D19	AC	Liberal Learning	-	2*	-	-	-	-	-	50*	-	
20	24CSEU6C20	AC	Finishing School Training - VI	-	3*	-	-	-	-	-	50*	-	
			Total	**22**	**16**	**10**	**1**						**700**

HONORS

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	L	P	T	ISE	MSE	ESE	INT	OE/	
1	24CSEU6Z01	Honors	Artificial Neural Networks	3	3	-	-	20	30	50	-	-	100
2	24CSEU6Z02	Honors	Artificial Neural Networks Lab	1	-	2	-	-	-	-	25	-	25
3	24CSEU6Z03	Honors	Ethical Hacking	3	3	-	-	20	30	50	-	-	100
4	24CSEU6Z04	Honors	Ethical Hacking Lab	1	-	2	-	-	-	-	25	-	25

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course



D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2023-24 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- VII)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE/ PoE	
					L	P	T						
1	23CSEU7P01	PCC	Advanced Database Systems	**3**	3		-	20	30	50		-	100
2	23CSEU7P02	PCC	Advanced Database Systems Lab	**1**		2					25	25	50
3	23CSEU7P03	PCC	Software Testing and Quality Assurance	**2**	1	2	-	-	-	-	25	25	50
4	23CSEU7M04	MDM-V	API Testing	**2**	2	-	-	-	-	50	-	-	50
5	23CSEU7E05	PEC-IV	Cyber Security	3	3	-	-	20	30	50	-	-	100
6	23CSEU7E06		Artificial Neural Network										
7	23CSEU7E07		Mobile Technology										
8	23CSEU7E08	PEC-V	Business Intelligence and Analysis	3	3	-	-	20	30	50	-	-	100
9	23CSEU7E09		Computer Vision										
	23CSEU7E10		Natural Language Processing										
10	23CSEU7E11		Software Defined Network										
11	23CSEU7R11	RM$	Research Methodology	**4**	4	-	-	20	30	50	-	-	100
12	23CSEU7J12	PR	Project	**4**	-	8	-	-	-	-	75	75	150
13	23CSEU7D13	AC	Liberal Learning	-	2*	-	-	-	-	-	50*	-	0
			Total	**22**	**14**	**12**	**-**						**700**

HONORS

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	L	P	T	ISE	MSE	ESE	INT	OE/	
1	23CSEU7Z01	Honors	Deep Learning	3	3	-	-	20	30	50	-	-	100
2	23CSEU7Z02	Honors	Deep Learning Lab	1	-	2	-	-	-	-	25	-	25
3	23CSEU7Z03	Honors	Cyber-crime and Laws	3	3	-	-	20	30	50	-	-	100
4	23CSEU7Z04	Honors	Cyber-crime and Laws Lab	1	-	2	-	-	-	-	25	-	25

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course
#- Students opted Cyber Security as Honors are not allowed to opt Foundations of Cyber Security (PEC IV)



D. Y. PATIL DEEMED TO BE UNIVERSITY
SCHOOL OF ENGINEERING AND MANAGEMENT
Teaching and Evaluation Scheme from Year 2023-24 (as per NEP-2020)
B. Tech. Computer Science Engineering (SEMESTER- VIII)

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	Contact Hrs			ISE	MSE	ESE	INT	OE/ PoE	
					L	P	T						
1	23CSEU8P01	PCC $	Agentic AI	**3**	3	-	-	20	30	50	-	-	100
2	23CSEU8P02	PCC $	Agentic AI Lab	**1**	-	2	-	-	-	-	25	-	25
3	23CSEU8M03	MDM-VI $	Capstone Project	**2**	-	4	-	-	-	-	25	25	50
4	23CSEU8E04	PEC-VI $	Real Time Operating Systems	2	2	-	-	-	-	50	-	-	50
5	23CSEU8E05		Deep Learning										
6	23CSEU8E06		Digital Forensics										
7	23CSEU8I07	INT	Internship	**12**	-	24	-	-	-	-	200	200	400
			Total	**20**	**5**	**30**	**-**						**625**

Note:
$ - Open & Distance Learning
* - Values are not included in total marks
Min. Marks for Passing: 40% of total marks of individual course
#- Students opted AIML as Honors are not allowed to opt Deep Learning (PEC VI)

HONORS

Sr. No.	Course Code	Course Type	Course Name	Teaching Scheme				Theory			Practical		Total Marks
				Credits	L	P	T	ISE	MSE	ESE	INT	OE/	
1	23CSEU8Z01	Honors	Capstone Project AI/ML $	2	-	4	-	-	-	-	50	-	50
2	23CSEU8Z02	Honors	Capstone Project Cyber Security $	2	-	4	-	-	-	-	50	-	50

