DR. D. Y. PATIL SCHOOL OF SCIENCE & TECHNOLOGY DR. D. Y. PATIL VIDYAPEETH, PUNE

(Deemed to be University)

JPU

(Accredited (3rd cycle) by NAAC with a CGPA of 3.64 on four-point scale at 'A++' Grade) (Declared as Category - I University by UGC Under Graded Autonomy Regulations, 2018) (An ISO 9001: 2015 and 14001:2015 Certified University and Green Education Campus)

Туре	of Courses	I	II	III	IV	V	VI	VII	VIII	Course Wise Credits
Dacinac	Basic Science	7	7	4						
BSC/ESC	Engineering Science	6	6							30
Program	Programme Core (PCC)	3	3	10	12	8	6			
Courses	Programme Elective (PEC)					3	6	3	3	57
Multidisciplinary (MM)	Multidisciplinary Minor / Open Electives				4		2			6
Holistic	Ability Enhancement (AEC)	2	2	2	2	2	2			
Development Courses	Indian Knowledge System (IKS)			2						31
	Value Addition Courses	1	1	2	2	2	3			
	Generic (GC)	1	1		2	2				
Experiential	Projects					3	3			
Learning Courses (ELC)	Internships							15	15	36
Tot	al Credits	20	20	20	22	20	22	18	18	160

Dr. D. Y. Patil Vidyapeeth, Dr. D. Y. Patil School of science & Technology First Year Engineering (2024 Course) (With effect from Academic Year 2024-25)

				SEN	AEST	ER 1										
Course	Course	Course Name	Teac	hing		Exan	nination	Asses	sment	Cre	dit sc	scheme				
Code	Туре		Sche	me		Sche	me									
			Lecture	Tutorial	Practical	CA	End Sem	Practical	Total	L	T	P	C			
PCC- AI-101	PCC	Programming-I	2	0	2	40	60	100	200	2	0	2	3			
ESC- AI-101	ESC	Basics of Electrical & Electronics Engineering	2	0	2	40	60	-	100	2	0	2	3			
ESC- AI-102	ESC	Engineering Graphics/ Engineering Mechanics	2	0	2	40	60	-	100	2	0	2	3			
BSC- AI-101	BSC	Engineering Mathematics	3	1	0	40	60	-	100	3	1	0	4			
BSC- AI-102	BSC	Applied Science- I	2	0	2	40	60	-	100	2	0	2	3			
AEC- AI-101	AEC	Professional Communication Skills	0	2	0	50	-	-	50	0	2	0	2			
VAC- AI-101	VAC	Design Thinking - I	0	0	2	50	-	-	50	0	0	2	1			
GC-AI- 101	GC	Universal Human Values	1	0	0	50	-	-	50	1	0	0	1			
			12	3	10	350	300	100	750	12	3	10	20			
				SEN	AEST	ER 2										
Course Code	Course Type	Course Name	Teac Sche	hing me		Exan Sche	nination me	Asses	sment	Cre	dit sc	heme				
			Lecture	Tutorial	Practical	CA	End Sem	Practical	Total	L	T	P	С			
PCC- AI-201	PCC	Programming-II	2	0	2	40	60	100	200	2	0	2	3			
ESC- AI-201	ESC	Digital Electronics & Logic Design	2	0	2	40	60	-	100	2	0	2	3			

ESC- AI-202	ESC	Engineering Graphics/	2	0	2	40	60	-	100	2	0	2	3
		Engineering Mechanics											
BSC- AI-201	BSC	Mathematics and Statistics	3	1	0	40	60	-	100	3	1	0	4
BSC- AI-202	BSC	Applied Science- II	2	0	2	40	60	-	100	2	0	2	3
AEC- AI-201	AEC	Project Based Learning I	0	0	4	40	60	-	100	0	0	4	2
VAC- AI-201	VAC	Design Thinking - II	0	0	2	50	-	-	50	0	0	2	1
GC-AI- 201	GC	Physical Education & Yoga Practices/NSS	0	0	2	50	-	-	50	0	0	2	1
			11	1	18	350	300	100	750	11	1	18	20

	Dr. D. Y. Patil Vidyapeeth, Dr. D. Y. Patil School of science & Technology Second Year Engineering (2024 Course)														
	Second Year Engineering (2024 Course) (With effect from Academic Year 2024-25)														
	SEMESTER 3														
				SEN	AEST.	ER 3									
Course Code	Course Type	Course Name	Teaching Scheme			Exan Sche	sment	Cre							
			Lecture	Tutorial	Practical	CA	End Sem	Practical	Total	L	T	Р	C		
PCC- AI-301	PCC	Data Structures & Algorithms	3	0	2	40	60	100	200	3	0	2	4		
PCC- AI-302	PCC	Software Engineering	2	0	2	20	30	50	100	2	0	2	3		
PCC- AI-303	PCC	Computer Networks and Security	2	0	2	40	60	50	200	2	0	2	3		
BSC- AI-301	BSC	Discrete Mathematics	3	1	0	40	60	-	100	3	1	0	4		
AEC- AI-301	AEC	Foreign Languages-I	2	0	0	50	-	-	50	2	0	0	2		
VAC- AI-301	VAC	Environmental Science	2	0	0	50	-	-	50	2	0	0	2		
GC-AI- 301	GC	Indian Knowledge System	2	0	0	50	-	-	50	2	0	0	2		
			16	1	6	350	300	400	750	16	1	6	20		
HC-AI- 301		Honors- I	He	onors	Paper	: –I (Oj	ptional)						3		
	1		1	SEN	/IEST	ER 4									

Course Code	Course Type	Course Name	Teaching SchemeExamination Assessment SchemeCredit scheme										
			Lecture	Tutorial	Practical	CA	End Sem	Practical	Total	L	T	Р	С
PCC- AI-401	PCC	Database Management System	3	0	2	40	60	100	200	3	0	2	4
PCC- AI-402	PCC	Artificial Intelligence	3	0	2	20	30	50	100	3	0	2	4
PCC- AI-403	PCC	Wireless Communication	3	0	2	20	30	50	100	3	0	2	4
MM- AI-401	MM	Multidisciplinary Minor I	3	0	2	20	30	50	100	3	0	2	4
AEC- AI-401	AEC	Project Based Learning II	0	0	4	50	-	100	150	0	0	4	2
VAC- AI-401	VAC	Banking and Financial Services	2	0	0	50	-	-	50	2	0	0	2
GC-AI- 401	GC	Co-curricular Course I	0	0	4	50	-	-	50	0	0	4	2
			14	0	16	250	150	350	750	14	0	16	22
HC-AI- 401		Honors- II	Ho	onors	Paper	–II (O	ptional))	•	•		•	3

	Dr. D. Y. Patil Vidyapeeth, Dr. D. Y. Patil School of science & Technology Third Year Engineering (2024 Course) (With effect from Academic Year 2024-25)													
				SEN	IEST	ER 5								
Course Code	Course Type	Course Name	Teac Sche	hing me		Exan Sche	nination me	Asses	sment	Cre	dit sc	heme		
			Lecture	Tutorial	Practical	CA	End Sem	Practical	Total	L	T	Р	C	
PCC- AI-501	PCC	Data Science	3	0	2	40	60	100	200	3	0	2	4	
PCC- AI-502	PCC	Machine Learning	3	0	2	20	30	50	100	3	0	2	4	
PEC- AI-501	PEC	Specialization Electives -I	2	0	2	20	30	50	100	2	0	2	3	
AEC- AI-501	AEC	Aptitude and Professional Skills -I	0	2	0	50	-	-	50	0	2	0	2	
VAC- AI-501	VAC	Foreign Languages-II	2	0	0	50	-	-	50	2	0	0	2	
GC-AI- 501	GC	Co-curricular Course II	0	0	4	50	-	-	50	0	0	4	2	
ELC- AI-501	ELC	Main Project -I	0	0	6	100	-	100	200	0	0	6	3	
			10	2	16	330	120	300	750	10	2	16	20	
HC-AI- 501		Honors- III	10 He	2 onors	16 Paper	330 -III(C	120 Optional	300	750	10	2	16	20 3	
HC-AI- 501		Honors- III	10 Ho	2 onors SEN	16 Paper	330 	120 Optional	300	750	10	2	16	20 3	
HC-AI- 501 Course Code	Course Type	Honors- III Course Name	10HoHoTeacSche	2 onors SEN hing me	16 Paper	330 -III(C ER 6 Exan Sche	120 Optional	300) Asses	750 sment	10Cre	2 dit sc	16 heme	20 3	
HC-AI- 501 Course Code	Course Type	Honors- III Course Name	10 Ho Teac Sche annon Joint	2 onors SEN hing me	16 Paper AEST	330 III(C ER 6 Exan Sche	120 Detional	Asses	sment	10 Cre L	2 dit sc T	heme P	20 3 C	
HC-AI- 501 Course Code PCC- AI-601	Course Type PCC	Honors- III Course Name Deep Learning	10HoHoTeacScheProtection <t< td=""><td>2 onors SEN hing me</td><td>16 Paper IEST Lactical 2</td><td>330 -III(C ER 6 Exam Sche Q 20</td><td>120 Deptional) mination me U S Pu H 30</td><td>Asses Asses Lactical 50</td><td>sment Iter 100</td><td>10 Cre L 2</td><td>2 dit sc T</td><td>16 heme P 2</td><td>20 3 C</td></t<>	2 onors SEN hing me	16 Paper IEST Lactical 2	330 -III(C ER 6 Exam Sche Q 20	120 Deptional) mination me U S Pu H 30	Asses Asses Lactical 50	sment Iter 100	10 Cre L 2	2 dit sc T	16 heme P 2	20 3 C	
HC-AI- 501 Course Code PCC- AI-601 PCC- AI-602	Course Type PCC PCC	Honors- III Course Name Deep Learning Data Modelling & Visualization	10HoHoTeacScheScheScheSche222	2 onors SEN hing me land Untorial 0	16PaperIESTI <td>330 III(C ER 6 Exan Sche ₹ 20 20</td> <td>120 ptional mination me Users Users Users Users Spuid 30 30</td> <td>300AssesLactical5050</td> <td>sment Iter Iter Iter Iter Iter Iter Iter Ite</td> <td>10 Cre L 2 2 2</td> <td>2 dit sc T 0 0</td> <td>16 heme P 2 2 2</td> <td>20 3 C 3 3</td>	330 III(C ER 6 Exan Sche ₹ 20 20	120 ptional mination me Users Users Users Users Spuid 30 30	300AssesLactical5050	sment Iter Iter Iter Iter Iter Iter Iter Ite	10 Cre L 2 2 2	2 dit sc T 0 0	16 heme P 2 2 2	20 3 C 3 3	
HC-AI- 501 Course Code PCC- AI-601 PCC- AI-602 PEC- AI-601	Course Type PCC PCC PEC	Honors- III Course Name Deep Learning Data Modelling & Visualization Specialization Electives -II	10HoHoTeacScheScheSche22222	2 onors SEN hing me lintotri U 0 0	16PaperIESTIESTIEST222222	330 III(C ER 6 Exan Sche 20 20 20	120 ptional) nination me Specific Specific 30 30 30 30	300AssesLactical505050	750 sment L 100 100	10 Cre L 2 2 2 2 2 2	2 dit sc T 0 0 0	16 heme P 2 2 2 2	20 3 C 3 3 3	
HC-AI- 501 Course Code PCC- AI-601 PCC- AI-602 PEC- AI-601 PEC- AI-602	Course Type PCC PCC PEC PEC	Honors- III Course Name Deep Learning Data Modelling & Visualization Electives -II Specialization Electives -III	10HoTeacScheandand22222222	2 onors SEN hing me land Untorial 0 0 0	16PaperIESTIESTIESTIEST2222222	330 III(C ER 6 Exan Sche ∑ 20 20 20 20 20	120 ptional nination me Users Spuid 30 30 30 30 30 30	300 Asses Image: second se	750 sment to 100 100 100	10 Cre L 2 2 2 2 2 2 2 2 2 2 2	2 dit sc T 0 0 0 0	16 heme P 2 2 2 2 2 2 2 2	20 3 C 3 3 3 3 3	
HC-AI- 501 Course Code PCC- AI-601 PCC- AI-602 PEC- AI-602 PEC- AI-602 MM- AI-601	Course Type PCC PCC PEC PEC MM	Honors- III Course Name Deep Learning Data Modelling & Visualization Specialization Electives -II Specialization Electives -III Multidisciplinary Minor II	10HoHoTeacSchePripos12222222222222222222222	2 onors SEN hing me lang Intorial 0 0 0 0	16PaperIESTIEST222220	330 ER 6 Exan Sche V 20 20 20 20 50	120 pptional) nination me S PULE 30 30 30 30 30	300 Asses Last 50 50 50 50 50 50 50	750 sment L 100 100 100 50	10 Cre L 2 2 2 2 2 2 2 2 2 2 2 2	2 dit sc T 0 0 0 0	16 heme P 2 2 2 2 0	20 3 C 3 3 3 3 2	
HC-AI- 501 Course Code PCC- AI-601 PCC- AI-602 PEC- AI-602 MM- AI-601 AEC- AI-601	Course Type PCC PCC PEC PEC MM AEC	Honors- III Course Name Deep Learning Data Modelling & Visualization Specialization Electives -II Specialization Electives -III Multidisciplinary Minor II Aptitude and Professional Skills -II	10HoHoTeacSchePriport2222220	2onorsSENhing meIntoting 000000002	16PaperIESTIEST222200	330 -III(C ER 6 Exan Sche 20 20 20 20 20 50 50	120 pptional) nination me 30 30 30 30 - -	300 Asses Image: second se	750 sment I00 100 100 50 50	10 Cre L 2 2 2 2 2 0	2 dit sc T 0 0 0 0 2	16 heme P 2 2 2 2 0 0	20 3 C 3 3 3 2 2	

ELC-	ELC	Main Project -II	0	0	6	50	-	100	150	2	0	0	3
711-001			12	2	14	280	120	350	750	12	2	14	22
HC-AI- 601		Honors- IV	Но	onors	Paper	-IV(C	Optional))					3

	Dr.	D. Y. Patil Vidyape Fourt (With e	eth, h Ye ffect	Dr. D. ar Eng from	. Y. Pa gineer Acado	atil Sch ing (20 emic Y	iool of s)24 Cou Tear 202	science 1rse) 24-25)	& Tecl	hnolog	gy		
				SEN	MEST	ER 7							
Course Code	Course Type	Course Name	Tea Sch	aching neme		Exan Sche	ninatior me	n Asses	sment	Cre	dit sc	cheme	
			Lecture	Tutorial	Practical	CA	End Sem	Practical	Total	L	T	P	C
PEC- AI-701	PEC	Specialization Electives -IV	2	0	2	100	-	-	100	2	0	2	3
ELC- AI-701	ELC	Internships/ Research Project- I	0	0	30	150	-	300	450	0	0	30	15
			2	0	32	250	-	300	550	0	0	32	18
HC-AI- 701		Honors- V	ŀ	Honors	s Papei	r –V(O	ptional))					3
				SEN	MEST	ER 8							
Course Code	Course Type	Course Name	Tea Sch	aching neme		Exan Sche	ninatior me	n Asses	sment	Cre	dit sc	cheme	
			Lecture	Tutorial	Practical	CA	End Sem	Practical	Total	L	T	P	C
PEC- AI-801	PEC	Specialization Electives -V	2	0	2	100	-	-	100	2	0	2	3
ELC- AI-701	ELC	Internships/ Research Project- I	0	0	30	150	-	300	450	0	0	30	15
			2	0	32	250	-	300	550	0	0	32	18
HC-AI- 801 Honors- VI Honors Paper –VI (Optional)											3		

Bouquet of Specialization Elective Courses

Indicative list of Specialization Elective Courses

*As per interest of the students. Students will have to complete 12-week FDP level courses (3 credits

each) from NPTEL (The list of courses will be floated by the institute)

* As per Industry requirements/ Technology Development in the field of Computer Science & Engineering

- Cloud Computing
- Networks and Distributed Systems
- Information Security
- Block Chain

Indicative list of Multidisciplinary Minors

* As per interest of the students. Students will have to complete 12-week FDP level courses (3 credits each) from NPTEL (The list of courses will be floated by the institute)

- Management
- Electronics
- Design Technology
- Biotechnology

Notes:

1. Degree with Multidisciplinary Minor (MM):

Achieve a minimum of 160 credits to earn a B.Tech degree with a Multidisciplinary Minor.

2. Degree with MM and Honors/Double Minor:

a) B.Tech. -Honors and Multidisciplinary Minor (with additional 18 credits):

- Earn 160 credits, plus 18 additional credits.
- Complete special self-study modules (one per semester from the 3rd semester) based on core course syllabi (3 credits each).
- *In the 7th and 8th semesters, complete two papers with GATE level questions (3 credits each).

OR

- *Complete special self-study modules (one per semester from the 3rd semester) based on core course syllabi (3 credits each).
- In the 7th and 8th semesters, complete 12-week courses from NPTEL (3 credits each). The institute will provide a list of eligible courses.

b) B.Tech.- Honors with Research and Multidisciplinary Minor (additional 18 credits by research):

- **Complete a 2-month research internship in the summer after the 2nd and 3rd years (4 credits each), and a project after the 4th year (4 credits).
- *Complete two NPTEL courses of FDP level (3 credits each) in the 7th and 8th semesters.

Credit requirements for four different options of the Exit Degree

Semester	Ι	II	III	IV	V	VI	VII	VIII	Total
B. Tech with	20	20	20	22	20	22	18	18	160
Multidisciplinary									
Minor (MM)									
B. Tech with	20	20	20+3*	22+3*	20+3*	22+3*	18+3*	18+3*	178
Honors and									
Multidisciplinary									
Minor (MM)									
B. Tech. Honors	20	20	20	22+4*	20	22+4**	18+3*	18+3*+4**	178
with Research									

and					
Multidisciplinary					
Minor					

- 3. Students can receive certificates upon completing specific milestones in the program:
 - a. **Certificate in Engineering**: Upon completion of one year (earning 40 credits) and an 8-week summer workshop/Training/Certification from Industry.
 - b. **Diploma in Engineering**: Upon completion of two years (earning 82 credits) and an 8-week summer workshop/Training/Certification from Industry.
 - c. **B.Sc. Engineering**: Upon completion of three years (earning 124 credits) and an 8-week summer workshop/Training/Certification from Industry.
- 4. The University has established a technical support team to manage the registration of Academic Bank of Credits (ABC).