

B.E- AI & ML
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
OF I TO VIII SEMESTERS
FOR THE STUDENTS ADMITTED IN THE
ACADEMIC YEAR 2020-21

SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH I SEMESTER (A.Y 2020-21)

B.E (AI&ML) I Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
UII20HS110EH	English Language and Communication – I	2	-	-	3	60	40	2
UII20BS110MA	Engineering Mathematics – I	3	-	-	3	60	40	3
UII20BS010PH	Semiconductor Physics and Optoelectronic devices	3	1	-	3	60	40	4
UII20ES120CS	Programming for Problem Solving	3	-	-	3	60	40	3
UII20ES110EC	Introduction to Electronics Engineering	3	-	-	3	60	40	3
UII20ES030CE	Engineering Drawing	1	-	2	3	60	40	2
PRACTICALS								
UII20HS111EH	English Language and Communication Skills Lab – I	-	-	2	3	50	30	1
UII20BS011PH	Semiconductor and Optoelectronic Lab	-	-	2	3	50	30	1
UII20ES121CS	Programming for Problem Solving Lab	-	-	2	3	50	30	1
UII20ES111EC	Introduction to Electronics Engineering Lab	-	-	2	3	50	30	1
TOTAL		15	1	10		560	360	21
GRAND TOTAL					26		920	
Left over hours are allocated for Sports / Library / PDC / Mentor Interaction / CC / RC / TC								

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH II SEMESTER (A.Y 2020-21)**

B.E (AI&ML) II Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	P/D		SEE	CIE	
THEORY								
UII20HS210EH	English Language and Communication – II	2	-	-	3	60	40	2
UII20BS210MA	Engineering Mathematics – II	3	-	-	3	60	40	3
UII20BS010CH	Material Chemistry	3	-	-	3	60	40	3
UII20ES010EE	Basic Electrical Engineering	2	-	-	3	60	40	2
UII20ES010CE	Basic Engineering Mechanics	3	-	-	3	60	40	3
UII20BS230CS	Discrete Structures	3	-	-	3	60	40	3
UII20ES240CS	Python Programming	2	-	-	3	60	40	2
PRACTICALS								
UII20HS211EH	English Language and Communication Skills Lab – II	-	-	2	3	50	30	1
UII20BS011CH	Chemistry Lab	-	-	2	3	50	30	1
UII20ES011EE	Basic Electrical Engineering Lab	-	-	2	3	50	30	1
UII20ES241CS	Python Programming Lab	-	-	2	3	50	30	1
TOTAL		18	-	8		620	400	22
GRAND TOTAL		26				1020		
Left over hours are allocated for Sports / Library / PDC / Mentor Interaction / CC / RC / TC								

SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH III SEMESTER (A.Y 2021-22)

B.E (AI&ML) III Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
UII20HS330EH	Skill Development - I : Communication Skills in English	2	-	-	3	60	40	2
UII20HS010EH	Human Values and Professional Ethics-I	1	-	-	2	40	30	1
UII20BS320MA	Transform Techniques, Probability and Statistics	3	-	-	3	60	40	3
UII20PC310CS	Logic and Switching Theory	3	-	-	3	60	40	3
UII20PC320CS	Data Structures	3	-	-	3	60	40	3
UII20PC330CS	Object Oriented Programming	3	-	-	3	60	40	3
UII20PC340CS	Computer Architecture & Microprocessors	3	-	-	3	60	40	3
UII20OE3XXXX	Open Elective-I	2	-	-	3	60	40	2
UII20MC310ME	Introduction to Entrepreneurship	1	-	-	2	40	30	0
PRACTICALS								
UII20PC321CS	Data Structures Lab	-	-	2	3	50	30	1
UII20PC331CS	Object Oriented Programming Lab	-	-	2	3	50	30	1
UII20PC341CS	Computer Architecture and Microprocessors Lab	-	-	2	3	50	30	1
TOTAL		21	0	6		650	430	23
GRAND TOTAL		27				1080		
Student should acquire one online certification course during III Semester to VII Semester								
Left over hours are allocated for Extra Curricular Activities, Co-Curricular Activities, Sports / Library / Mentor Interaction / CC / RC / TC								

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH IV SEMESTER (A.Y 2021-22)**

B.E (AI&ML) IV Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
UII20HS430EH	Skill Development - II : Communication Skills in English	2	-	-	3	60	40	2
UII20PC410CS	Operating Systems	3	-	-	3	60	40	3
UII20PC420CS	Database Management Systems	3	-	-	3	60	40	3
UII20PC430CS	Design & Analysis of Algorithms	3	-	-	3	60	40	3
UII20PC440CS	Artificial Intelligence	3	-	-	3	60	40	3
UII20OE4XXXX	Open Elective-II	3	-	-	3	60	40	3
UII20MC010CE	Environmental Science	2	-	-	3	60	40	0
PRACTICALS								
UII20PC411CS	Operating Systems Lab	-	-	2	3	50	30	1
UII20PC421CS	Database Management Systems Lab	-	-	2	3	50	30	1
UII20PC431CS	Design & Analysis of Algorithms Lab	-	-	2	3	50	30	1
UII20PC541CS	Mini Project	-	-	2	-	-	30	1
TOTAL		19	-	8		570	400	21
GRAND TOTAL					27	970		
Student should acquire one online certification course during III Semester to VII Semester								
Left over hours are allocated for Co-Curricular Activities / Sports / Library / Mentor Interaction / CC / RC / TC								

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH V SEMESTER (A.Y 2022-23)**

B.E (AI&ML) V Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
UII20HS510EH	Skill Development – III : Soft Skills	1	-	-	2	40	30	1
UII20HS020EH	Human Values and Professional Ethics-II	1	-	-	2	40	30	1
UII20HS040EH	Economics and Finance for Engineers	2	-	-	3	60	40	2
UII20PC510CS	Automata, Languages and Computation	3	-	-	3	60	40	3
UII20PC520CS	Computer Networks	3	-	-	3	60	40	3
UII20PC530CS	Machine Learning	3	-	-	3	60	40	3
UII20PE5XXCS	Professional Elective – I	3	-	-	3	60	40	3
UII20PE510CS	Skill Development - III : Technical Skills	1	-	-	2	40	30	1
UII20OE5XXXX	Open Elective-III	3	-	-	3	60	40	3
PRACTICALS								
UII20PC521CS	Computer Networks Lab	-	-	2	3	50	30	1
UII20PC531CS	Artificial Intelligence and Machine Learning Lab	-	-	2	3	50	30	1
UII20PW519CS	Mini project	-	-	2	3	50	30	1
TOTAL		20	0	6		630	420	23
GRAND TOTAL		26				1050		23
Student should acquire one online certification course during III Semester to VII Semester								
Left over hours are allocated for Extra Curricular Activities / Co-Curricular Activities / Sports / Library / Mentor Interaction / CC /RC / TC								

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH VI SEMESTER (A.Y 2022-23)**

B.E (AI&ML) VI Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
UII20HS610EH	Skill Development-IV : Soft Skills	1	-	-	2	40	30	1
UII20PC610CS	Internet of Things	2	-	-	3	60	40	2
UII20PC620CS	Software Engineering	2	-	-	3	60	40	2
UII20PC630CS	Deep Learning	3	-	-	3	60	40	3
UII20PE6XXCS	Professional Elective-II	3	-	-	3	60	40	3
UII20PE610CS	Skill Development-IV : Technical Skills	1	-	-	2	40	30	1
UII20OE6XXXX	Open Elective-IV	3	-	-	3	60	40	3
PRACTICALS								
UII20PC611CS	Internet of Things Lab	-	-	2	3	50	30	1
UII20PC621CS	Software Engineering Lab	-	-	2	3	50	30	1
UII20PC631CS	Deep Learning Lab	-	-	2	3	50	30	1
UII20PW619CS	Theme Based Project	-	-	2	-	-	30	1
TOTAL		15	0	8		530	380	19
GRAND TOTAL		23				910		
Student should acquire one online certification course during III Semester to VII Semester								
Left over hours are allocated for Co-Curricular Activities / Sports / Library / Mentor Interaction / CC /RC / TC								

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH VII SEMESTER (A.Y. 2023-24)**

B.E (AI&ML) VII Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
THEORY								
UII20PC710CS	Natural Language Processing	3	-	-	3	60	40	3
UII20PC720CS	Reinforcement Learning	3	-	-	3	60	40	3
UII20PC30CS	Distributed Systems and Cloud computing	3	-	-	3	60	40	3
UII20PE7XXCS	Professional Elective-III	3	-	-	3	60	40	3
UII20PE7XXCS	Professional Elective-IV	3	-	-	3	60	40	3
PRACTICALS								
UII20PC711CS	Natural Language Processing& Reinforcement LearningLab	-	-	2	3	50	30	1
UII20PC721CS	Distributed Systems and Cloud computing lab	-	-	2	3	50	30	1
UII20PW729CS	Project Seminar	-	-	2	-	-	30	1
TOTAL		15	0	6	-	400	290	18
GRAND TOTAL		21				690		
Student should acquire one online certification course during III Semester to VII Semester								
Left over hours are allocated for CC								

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
FOR B.E 2020-21 ADMITTED BATCH VIII SEMESTER (A.Y 2023-24)**

B.E (AI&ML) VIII Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	P/D		SEE	CIE	
THEORY								
UII20PE8XXCS	Professional Elective – V	3	-	-	3	60	40	3
UII20PE8XXCS	Professional Elective – VI	3	-	-	3	60	40	3
PRACTICALS								
UII20PW819CS	Project / Internship	-	-	16	Viva-Voce	50	50	8
TOTAL		6	-	16		170	130	14
GRAND TOTAL		22				300		

		Professional Electives –Stream					
		Big Data Analysis		Computing and Security		Applications	
		Course Code	Course Code	Course Code	Title	Course Code	Title
Sem -VI	PE -I	UII20PE610CS	Predictive Analysis	UII20PE 620CS	Computer Vision	UII20PE 630CS	Web Programming and Services
Sem -VII	PE-II	UII20PE710CS	Distributed Systems and Cloud Computing	UII20PE 720CS	Human Computer Interaction	UII20PE 730CS	Image Processing
	PE-III	UII20PE750CS	Big Data Analytics	UII20PE 760CS	Block chain Architecture	UII20PE 770CS	Applications of AI in Healthcare
	PE -IV	UII20PE714CS	Information retrieval and Web search	UII20PE 724CS	Information Security	UII20PE 734CS	Speech Systems
Sem -VIII	PE-V	UII20PE810CS	Applied Time Series Analysis	UII20PE 820CS	Computer Forensics	UII20PE 830CS	Robotics
	PE -VI	UII20PE850CS	Machine Learning with Big Data	UII20PE 860CS	Cryptography	UII20PE 870CS	Pattern Recognition

OPEN ELECTIVES OFFERED BY CSE DEPARTMENT

B.E. III SEMESTER				
S.No.	Elective	Code	Title	Credits
1	OE – I	UII20OE310CS	Introduction to Python Programming (Civil, EEE, ECE, MECH)	2
		UII20OE320CS	Cyber Security (Civil, EEE, ECE, MECH)	2
B.E. IV SEMESTER				
2	OE – II	UII20OE410CS	Introduction to Data Structures (Civil, EEE, ECE, MECH)	3
		UII20OE420CS	Introduction to Software Engineering (Civil, EEE, ECE, MECH)	3
B.E. V SEMESTER				
3	OE – III	UII20OE510CS	Fundamentals of Object Oriented Programming (Civil, EEE, ECE, MECH)	3
		UII20OE520CS	Web Design (Civil, EEE, ECE, MECH)	3
B.E. VI SEMESTER				
4	OE – IV	UII20OE610CS	Introduction to Databases (Civil, EEE, ECE, MECH)	3
		UII20OE620CS	Introduction to Operating Systems (Civil, EEE, ECE, MECH)	3

CREDIT DISTRIBUTION

Category	Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8	Category wise -Total credits	As per AICTE Actual Credits
HS	3	3	3	2	4	1	0	0	16	12
BS	8	10	3	0	0	0	0	0	21	24
ES	10	9	0	0	0	0	0	0	19	29
PC	0	0	15	15	11	10	11	0	62	49
PE	0	0	0	0	4	4	6	6	20	18
OE	0	0	2	3	3	3	0	0	11	12
MC	-	-	✓	✓	-	-	0	0	-	0
PRJ	0	0	0	1	1	1	1	8	12	15
-	21	22	23	21	23	19	18	14	161	159