

USHA RAMA

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by A.I.C.T.E & Permanently Affiliated to JNTU, Kakinada)

Accredited by NAAC with "A" Grade
on NH 16, Telaprolu, Krishna Dist – 521109

B.TECH

ARTIFICIAL INTELLIGENCE

COURSE STRUCTURE

UR23

**(Applicable for the batches admitted from the Academic
Year 2023-24)**

DEPARTMENT OF ARTIFICIAL INTELLIGENCE

COURSE STRUCTURE
(Applicable for batches admitted from 2023-2024)

B.Tech - I Year - I Semester							
S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	BS&H	Communicative English	2	0	0	2	2
2	BS&H	Chemistry	3	0	0	3	3
3	BS&H	Linear Algebra & Calculus	3	0	0	3	3
4	ES	Basic Civil & Mechanical Engineering	3	0	0	3	3
5	ES	Introduction to Programming	3	0	0	3	3
6	BS&H	Communicative English Lab	0	0	2	2	1
7	BS&H	Chemistry Lab	0	0	2	2	1
8	ES	Engineering Workshop Lab	0	0	3	3	1.5
9	ES	Computer Programming Lab	0	0	3	3	1.5
10	BS&H	Health and Wellness, Yoga and Sports	0	0	1	1	0.5
Total			14	0	11	25	19.5

B.Tech - I Year - II Semester							
S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	BS&H	Engineering Physics	3	0	0	3	3
2	BS&H	Differential Equations & Vector Calculus	3	0	0	3	3
3	ES	Basic Electrical and Electronics Engineering	3	0	0	3	3
4	ES	Engineering Graphics	1	0	4	5	3
5	ES	IT Workshop	0	0	2	3	1
6	PC	Data Structures	3	0	0	3	3
7	BS&H	Engineering Physics Lab	0	0	2	2	1
8	ES	Electrical and Electronics Engineering Workshop	0	0	3	3	1.5
9	PC	Data Structures Lab	0	0	3	3	1.5
10	BS&H	NSS/NCC/Scouts & Guides/Community Service	0	0	1	1	0.5
Total			13	0	15	28	20.5

B.Tech - II Year - I Semester							
S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	BS	Discrete Mathematics & Graph Theory	3	0	0	3	3
2	HSMC	Universal Human Values 2- Understanding Harmony & Ethical Human Conduct	2	1	0	3	3
3	ES	Principles of Artificial Intelligence	3	0	0	3	3
4	PC	Data Base Management System	3	0	0	3	3
5	PC	Object Oriented Programming Through Java	3	0	0	3	3
6	PC	Data Base Management System Lab	0	0	3	3	1.5
7	PC	Object Oriented Programming Through Java Lab	0	0	3	3	1.5
8	Skill Enhancement Course	Python programming	0	1	2	3	2
9	PC	Environmental Science	2	0	0	2	0
Total			16	2	8	26	20

B.Tech - II Year - II Semester							
S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	Management Course-I	Managerial Economic and Financial Analysis	2	0	0	2	2
2	BS&H	Statistical Methods for Data Science	3	0	0	3	3
3	PC	Data Warehousing and Data Mining	3	0	0	3	3
4	PC	Operating System	3	0	0	3	3
5	PC	Digital Logic & Computer Organization	3	0	0	3	3
6	PC	Data Warehousing and Data Mining Lab	0	0	3	3	1.5
7	PC	Operating System Lab	0	0	3	3	1.5
8	SOC	Full Stack Development -1	0	1	2	3	2
9	ES	Design Thinking & Innovation	1	0	2	3	2
Total			15	1	10	27	21
Mandatory Community Service Project Internship of 08 weeks duration during summer Vacation							

B.Tech - III Year - I Semester							
S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	PC	Big Data Analytics	3	0	0	3	3
2	PC	Natural Language Processing	3	0	0	3	3
3	PC	Machine Learning	3	0	0	3	3
4	PE-I	1.Automata Theory & Compiler Design 2.Soft Computing 3.Software Engineering 4.Advanced Data Structures & Algorithm Analysis 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3	3
5	OE-I	Open Elective-I	3	0	0	3	3
6	PC	Machine Learning Lab	0	0	3	3	1.5
7	PC	Big Data AnalyticsLab	0	0	3	3	1.5
8	SEC	Full Stack Development -2	0	1	2	3	2
9	ES	Tinkering Lab (User Interface Design Using Flutter	0	0	2	3	1
10	CSP	Evaluation of Community Service Internship	0	0	0	0	2
Total			15	1	10	27	23
11	MC	Student may select from the same Minor Pool	3	0	0	3	3
12	MC	Minor Course through SWAYAM / NPTEL (Minimum 12 Week, 3 credit course)	3	0	0	3	3

B.Tech - III Year - II Semester							
S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	PC	Computer Networks	3	0	0	3	3
2	PC	Deep Learning	3	0	0	3	3
3	PC	Data Visualization	3	0	0	3	3
4	PE-II	1. Software Testing Methodology 2. Cryptography & Network Security 3.Recommender Systems 4.Object Oriented Analysis and Design 5.12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3	3
5	PE-III	1. DEVOPS 2. Computer Vision 3. Cloud Computing 4. Social Network Analysis 6. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	0	3
6	OE-II	Open Elective-II	3	0	0	3	3
7	PC	Deep Learning Lab	0	0	3	3	1.5
8	PC	Data Visualization Lab	0	0	3	3	1.5
9	SEC	Soft skills OR IELTS Or CN lab with NS2	0	1	2	3	2
10	Audit Course	Technical Paper Writing & IPR	2	0	0	2	0
Total			20	1	8	26	23
*Mandatory Industry Internship of 08 weeks duration during summer vacation							
11	MC	Student may select from the same minors pool	3	0	3	3	4.5

* Under Industry Internship interested students can pursue SWAYAM Plus courses viz., Hands-on Masterclass on Data Analytics OR Artificial Intelligence for Real-World Application

B.Tech - IV Year - I Semester

S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	PC	Generative AI	3	0	0	3	3
2	Management Course - II	Management Science Human Resource Management Entrepreneurship & Incubation	2	0	0	3	2
3	PE-IV	1.Software Architecture & Design Pattern 2.Block chain Technology 3.Quantum Computing 4.NoSQL databases 5.12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3	3
4	PE-V	1.Agile methodologies 2.Expert Systems 3.Reinforcement Learning 4.HPC 5.12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3	3
5	OE-III	Open Elective-III	3	0	0	3	3
6	OE-IV	Open Elective-IV	3	0	0	3	3
7	SEC	Prompt Engineering	0	1	2	3	2
8	Audit Course	Constitution of India	2	0	0	3	0
9	Internship	Evaluation of Industry Internship	0	0	0	0	2
Total			19	1	2	24	21

B.Tech - IV Year - II Semester							
S.No.	Course Category	Course Title	L	T	P	Contact Hrs./Wk	C
1	BS&H	Full Semester Internship & Project Work	0	0	24	0	12
Total			0	0	24	0	12

Note: Student need to do at least ONE MOOC Course (of 3 credits out of 160 credits) to meet the mandatory requirement (11th criteria, as per R23 Regulations)