



## **St. Johns College of Engineering & Technology (Autonomous)**

(Accredited by NAAC, Approved by AICTE, Recognized by UGC under 2(f) & 12(B) An ISO 9001:2015 Certified Institution and Affiliated to JNTUA, Ananthapuramu.)

**Yerrakota, Yemmiganur-518360, Kurnool(D), Andhra Pradesh, India.**

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### **B.Tech (Regular-Full time)**

(Effective for the students admitted into I-Year from the Academic Year **2024-25** onwards)

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### **B.Tech.(Lateral Entry Scheme)**

(Effective for the students admitted into II-Year through Lateral Entry Scheme from the Academic Year **2025-26** onwards)

**PROPOSED COURSE STRUCTURE – B.TECH (R24)**  
**(Applicable from the academic year 2024-25 onwards)**

**INDUCTION PROGRAM**  
**(Common to all branches)**

<b>SNO</b>	<b>Course Name</b>	<b>Category</b>	<b>L-T-P-C</b>
1	Physical Activities -- Sports, Yoga and Meditation, Plantation	<b>MC</b>	0-0-6-0
2	Career Counseling	<b>MC</b>	2-0-2-0
3	Orientation to all branches -- career options, tools, etc.	<b>MC</b>	3-0-0-3
4	Orientation on admitted Branch -- corresponding labs, tools and platforms	<b>EC</b>	2-0-3-0
5	Proficiency Modules & Productivity Tools	<b>ES</b>	2-1-2-0
6	Assessment on basic aptitude and mathematical skills	<b>MC</b>	2-0-3-0
7	Remedial Training in Foundation Courses	<b>MC</b>	2-1-2-0
8	Human Values & Professional Ethics	<b>MC</b>	3-0-0-0
9	Communication Skills -- focus on Listening, Speaking, Reading, Writing skills	<b>BS</b>	2-1-2-0
10	Concepts of Programming	<b>ES</b>	2-0-2-0

**GROUP A: CSE, EEE, CSE (Artificial Intelligence)****B.Tech. – I Year I Semester**

<b>SNO</b>	<b>Category</b>	<b>Title</b>	<b>L/D</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	BS&H	Communicative English	2	0	0	2
2	BS&H	Engineering Chemistry/ Chemistry/Fundamental Chemistry	3	0	0	3
3	BS&H	Linear Algebra & Calculus	3	0	0	3
4	Engineering Science	Basics Civil & Mechanical Engineering	3	0	0	3
5	Engineering Science	Introduction to Programming	3	0	0	3
6	BS&H	Communicative English Lab	0	0	2	1
7	BS&H	Engineering Chemistry/ Chemistry/Fundamental Chemistry Lab	0	0	2	1
8	Engineering Science	Engineering Workshop	0	0	3	1.5
9	Engineering Science	Computer Programming Lab	0	0	3	1.5
10	BS&H	Health and wellness, Yoga and Sports	-	-	1	0.5
<b>Total</b>			<b>14</b>	<b>00</b>	<b>11</b>	<b>19.5</b>

**B.Tech. – I Year II Semester**

<b>SNO</b>	<b>Category</b>	<b>Title</b>	<b>L/D</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	BS&H	Engineering Physics	3	0	0	3
2	BS&H	Differential Equations & Vector Calculus	3	0	0	3
3	Engineering Science	Basics Electrical and Electronics Engineering	3	0	0	3
4	Engineering Science	Engineering Drawing	1	0	4	3
5	Engineering Science	IT Workshop	0	0	2	1
6	Professional Core	Data Structures / Electrical Circuit Analysis – I (Branch specific)	3	0	3	3
7	BS&H	Engineering Physics Lab	0	0	2	1
8	Engineering Science	Electrical and Electronics Engineering Workshop	0	0	3	1.5
9	Professional Core	Data Structures Lab / Electrical Circuit Analysis – I Lab	0	0	3	1.5
10	BS&H	NSS/NCC/Scouts & Guides/Community Service	-	-	1	0.5
<b>Total</b>			<b>13</b>	<b>00</b>	<b>15</b>	<b>20.5</b>

**GROUP-B: ECE, CSE (Data Science), Civil Engineering, Mechanical Engineering****B.Tech. – I Year I Semester**

<b>SNO</b>	<b>Category</b>	<b>Title</b>	<b>L/D</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	BS&H	Engineering Physics	3	0	0	3
2	BS&H	Linear Algebra & Calculus	3	0	0	3
3	Engineering Science	Basic Electrical & Electronics Engineering	3	0	0	3
4	Engineering Science	Engineering Graphics	1	0	4	3
5	Engineering Science	Introduction to Programming	3	0	0	3
6	Engineering Science	IT Workshop	0	0	2	1
7	BS&H	Engineering Physics Lab	0	0	2	1
8	Engineering Science	Electrical & Electronics Engineering Workshop	0	0	3	1.5
9	Engineering Science	Computer Programming Lab	0	0	3	1.5
10	BS&H	NSS/NCC/Scouts & Guides/Community Service	-	-	1	0.5
<b>Total</b>			<b>13</b>	<b>00</b>	<b>15</b>	<b>20.5</b>

**B.Tech. – I Year II Semester**

<b>SNO</b>	<b>Category</b>	<b>Title</b>	<b>L/D</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	BS&H	Communicative English	2	0	0	2
2	BS&H	Engineering Chemistry / Chemistry / Fundamental Chemistry	3	0	0	3
3	Engineering Science	Differential Equations & Vector Calculus	3	0	0	3
4	Engineering Science	Civil & Mechanical Engineering	3	0	0	3
5	Professional Core	Engineering Mechanics/Network Analysis/ Data structures (Branch specific)	3	0	0	3
6	BS&H	Communicative English Lab	0	0	2	1
7	BS&H	Engineering Chemistry / Chemistry / Fundamental Chemistry Lab	0	0	2	1
8	Engineering Science	Engineering Workshop	0	0	3	1.5
9	Professional Core	Engineering Mechanics & Building Practices Lab Engineering Mechanics Lab/ Network Analysis Lab/ Data structures Lab	0	0	3	1.5
10	BS&H	Health and wellness, Yoga and Sports	-	-	1	0.5
<b>Total</b>			<b>14</b>	<b>00</b>	<b>11</b>	<b>19.5</b>

**B.Tech. – II Year- I Semester**

S.No.	Category	Title	L	T	P	Credits
1	BS	Engineering Mathematics (Branch specific)	3	0	0	3
2	HSMC	Universal Human Values	2	1	0	3
3	Engineering Science		3	0	0	3
4	Professional Core		3	0	0	3
5	Professional Core		3	0	0	3
6	Professional Core		0	0	3	1.5
7	Professional Core		0	0	3	1.5
8	Skill Enhancement Course		0	1	2	2
9	Audit Course		2	0	0	-
<b>Total</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>20</b>

**B.Tech. II Year II Semester**

S.No.	Category	Title	L	T	P	Credits
1	Management Course- I		2	0	0	2
2	Engineering Science/Basic Science		3	0	0	3
3	Professional Core		3	0	0	3
4	Professional Core		3	0	0	3
5	Professional Core		3	0	0	3
6	Professional Core		0	0	3	1.5
7	Professional Core		0	0	3	1.5
8	Skill Enhancement course		0	1	2	2
9	Engineering Science	Design Thinking	1	0	2	2
<b>Total</b>			<b>15</b>	<b>1</b>	<b>10</b>	<b>21</b>
<b>Mandatory Community Service Project Internship of 08 weeks duration during summer vacation</b>						

**B.Tech. – III Year I Semester**

S.No.	Category	Title	L	T	P	Credits
1	Professional Core		3	0	0	3
2	Professional Core		3	0	0	3
3	Professional Core		3	0	0	3
4	Professional Elective - I		3	0	0	3
5	Open Elective-I		3	0	0	3
6	Professional Core		0	0	3	1.5
7	Professional Core		0	0	3	1.5
8	Skill Enhancement course		0	1	2	2
9	Engineering Science	Tinkering Lab	0	0	2	1
10	Evaluation of Community Service Internship		-	-	-	2
<b>Total</b>			<b>15</b>	<b>1</b>	<b>10</b>	<b>23</b>

**B.Tech. III Year II Semester**

S.No.	Category	Title	L	T	P	Credits
1	Professional Core		3	0	0	3
2	Professional Core		3	0	0	3
3	Professional Core		3	0	0	3
4	Professional Elective-II		3	0	0	3
5	Professional Elective-III		3	0	0	3
6	Open Elective - II		3	0	0	3
7	Professional Core		0	0	3	1.5
8	Professional Core		0	0	3	1.5
9	Skill Enhancement course		0	1	2	2
10	Audit Course		2	0	0	-
<b>Total</b>			<b>20</b>	<b>1</b>	<b>08</b>	<b>23</b>
<b>Mandatory Industry Internship of 08 weeks duration during summer vacation</b>						



**B.Tech. – IV Year I Semester**

S.No	Category	Title	L	T	P	Credits
1	Professional Core		3	0	0	3
2	Management Course- II		2	0	0	2
3	Professional Elective-IV		3	0	0	3
4	Professional Elective-V		3	0	0	3
5	Open Elective - III		3	0	0	3
6	Open Elective-IV		3	0	0	3
7	Skill Enhancement Course		0	1	2	2
8	Audit Course(Mandatory Course)	Constitution of India	2	0	0	-
9	Internship		-	-	-	2
<b>Total</b>			<b>16</b>	<b>1</b>	<b>02</b>	<b>21</b>

**B.Tech.– IV Year II Semester**

S.No	Category	Title	L	T	P	Credits
1	PR	Internship and Project	-	-	<b>24</b>	<b>12</b>

**STRUCTURE OF UG PROGRAM**

S.No.	Category	Credit Breakup
1.	Humanities and Social Sciences including Management courses	11
2.	Basic Science Courses	20
3.	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	23.5
4.	Professional Core Courses	52.5
5.	Professional Elective courses relevant to chosen specialization/branch	15
6.	Open subjects – Electives from other technical and /or emerging subjects	12
7.	Project work and internship in industry or elsewhere	16
8.	Skill Enhancement Courses	10
9.	Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Technical Paper Writing & IPR]	noncredit
<b>Total</b>		<b>160</b>