

1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year



# **SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**

**(AUTONOMOUS INSTITUTION UNDER UGC, NEW DELHI)**

**ACCREDITED BY NBA & NAAC**

**APPROVED BY AICTE, NEW DELHI,**

**AFFILIATED TO JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD  
SHERIGUDA(V), IBRAHIMPATNAM(M), R.R.DIST. – 501 510. TELANGANA**

**Department of  
Civil Engineering  
(BR20)**

# SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC, New Delhi)

## Choice Based Credit System (CBCS)

REGULATIONS – BR20

### B. Tech. - CIVIL ENGINEERING

(Common to ME & CIVIL)

#### I YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20EPH1101	Engineering Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EPH11L1	Engineering Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20HAS1102	Environmental Science	3	0	0	0
8	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

#### I YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20MED1103	Engineering Mechanics	3	1	0	4
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills Lab	0	0	2	1
8	R20COI1101	Constitution of India	3	0	0	0
9	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>19</b>



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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. CIVIL ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV2101	Surveying & Geomatics	3	0	0	3
2	R20MED2105	Hydraulics and Hydraulic Machinery	3	0	0	3
3	R20CIV2102	Strength of Materials-I	3	0	0	3
4	R20MTH2101	Probability Distributions and Statistical Methods	3	1	0	4
5	R20MED2106	Fluid Mechanics	3	0	0	3
6	R20CIV21L1	Surveying Lab	1	0	3	2
7	R20CIV21L2	Strength of Materials Lab	0	0	3	1.5
8	R20MED21L4	Hydraulics & Hydraulic Machinery Lab	0	0	3	1.5
9	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>16</b>	<b>1</b>	<b>11</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S.No	Course Code	Course Title	L	T	P	Credits
1	R20EEE2204	Basics of Electrical & Electronics Engineering	3	0	0	3
2	R20CIV2201	Building Materials, Construction and Planning	3	0	0	3
3	R20CIV2202	Strength of Materials-II	3	1	0	4
4	R20CIV2203	Structural Analysis -I	3	1	0	4
5	R20CIV2204	Engineering Geology	3	0	0	3
6	R20CIV22L1	Computer aided Civil Engineering Drawing	0	0	3	1.5
7	R20CIV22L2	Engineering Geology lab	0	0	3	1.5
8	R20EEE22L3	Electrical & Electronics Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



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**REGULATIONS – BR20**

**B. Tech. CIVIL ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P/D	Credits
1	R20CIV3101	Structural Analysis-II	3	1	0	4
2	R20CIV3102	Geotechnical Engineering	3	1	0	4
3	R20CIV3103	Structural Engineering –I(RCC)	3	1	0	4
4	R20CIV3104	Transportation Engineering-I	3	1	0	4
<b>Professional Elective-I</b>						
5	R20CIV3111	Concrete Technology	3	0	0	3
	R20MBA3112	Management Fundamentals for Engineers				
	R20CIV3113	Basics of Mechanical Engineering				
	R20MAC3100	MOOCs-I				
6	R20CIV31L1	Highway Engineering and Concrete Technology Lab	0	0	2	1
7	R20CIV31L2	Geotechnical Engineering Lab	0	0	2	1
8	R20HAS31L1	Advanced Communication Skills Lab	0	0	2	1
9	R20CSE3124	Cyber Security	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>4</b>	<b>6</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No	Course Code	Course Title	L	T	P	Credits
1	R20CIV3201	Hydrology & Water Resources Engineering	3	1	0	4
2	R20CIV3202	Environmental Engineering	3	0	0	3
3	R20MBA3201	Engineering Economics & Accounting	3	0	0	3
4	R20CIV3203	Structural Engineering –II(Steel)	3	1	0	4
<b>Professional Elective –II</b>						
5	R20CIV3221	Prestressed Concrete Structures	3	0	0	3
	R20CIV3222	Elements of Earth Quake Engineering				
	R20CIV3223	Finite Element Analysis				
	R20MAC3200	MOOCs-II				
6		<b>Open Elective –I</b>	3	0	0	3
7	R20CIV32L1	Environmental Engineering Lab	0	0	2	1
8	R20CIV32L2	Computer Aided Design Lab	0	0	2	1
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>4</b>	<b>22</b>

\*MC - Environmental Science – Should be Registered by Lateral Entry Students Only.



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**REGULATIONS – BR20**

**B. Tech. CIVIL ENGINEERING**

**IV YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4101	Estimation, Costing and Project Management	3	1	0	4
2	R20CIV4102	Transportation Engineering-II	3	1	0	4
<b>Professional Elective –III</b>						
3	R20CIV4131	Remote Sensing &GIS	3	0	0	3
	R20CIV4132	Ground Improvement Techniques				
	R20CIV4133	Advance Structural Analysis				
<b>Professional Elective –IV</b>						
4	R20CIV4141	Irrigation and Hydraulic Structures	3	0	0	3
	R20CIV4142	Theory of Elasticity				
	R20CIV4143	Ground water Hydrology				
5		<b>Open Elective –II</b>	3	0	0	3
6	R20CIV41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
7	R20CIV41L1	Seminar	0	0	2	1
8	R20CIV41P2	Comprehensive Viva-voce	0	0	2	1
		<b>Total Credits</b>	<b>15</b>	<b>2</b>	<b>4</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
<b>Professional Elective -V</b>						
1	R20CIV4251	Foundation Engineering	3	0	0	3
	R20CIV4252	Environmental Impact Assessment				
	R20CIV4253	Air pollution				
<b>Professional Elective –VI</b>						
2	R20CIV4261	Airports, railways and water ways	3	0	0	3
	R20CIV4262	Intelligent Transportation Systems				
	R20CIV4263	Urban Transportation Planning				
3		<b>Open Elective –III</b>	3	0	0	3
4	R20CIV42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>



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## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R20CSE3272	Database Concepts				
3	R20ECE3273	Consumer Electronics				
4	R20EEE3274	Electrical Estimation & Costing				
5	R20INF3275	Information Technology Essentials				
6	R20MED3276	Introduction to Robotics				
7	R20HMS3277	Fundamentals of Entrepreneurship				
8	R20HMS3278	Day to Day Biology				
9.	R20CIV3272	Building Architecture				

### Open Elective –II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4181	Green Building Engineering	3	0	0	3
2	R20CSE4182	Cyber Security Fundamentals				
3	R20ECE4183	Principles of Modern Communication Systems				
4	R20EEE4184	Illumination Engineering				
5	R20INF4185	E-Commerce				
6	R20MED4186	Industrial Design & Ergonomics				
7	R20HMS4187	Creative Writing				
8	R20HMS4188	Design Thinking				
9.	R20CIV4182	Pre Fabricated Structures				
10		MOOCs – III				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4291	Spatial Technology Concepts	3	0	0	3
2	R20CSE4292	Fundamentals of Soft Computing				
3	R20ECE4293	Audio & Video Engineering				
4	R20EEE4294	Non Conventional Energy Resources				
5	R20INF4295	Information Security Fundamentals				
6	R20MED4296	Total Engineering Quality Management				
7	R20HMS4297	Human Values & Professional Ethics for Engineers				
8	R20HMS4298	Science Fiction				
9	R20CIV4292	Building Infrastructure Auditing				
10		MOOCs - IV				



  
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# **Department of EEE**

**(BR20)**



**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**Choice Based Credit System (CBCS)**

**REGULATIONS –BR20**

**B. Tech. ELECTRICAL & ELECTRONICS ENGINEERING**  
**Common to EEE, CSE & IT**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



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**REGULATIONS –BR20**

**B. Tech. ELECTRICAL & ELECTRONICS ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MED2203	Fluid Mechanics & Hydraulic Machines	3	1	0	4
2	R20EEE2101	Electrical Circuit Analysis	3	1	0	4
3	R20ECE2105	Analog Electronics	3	0	0	3
4	R20EEE2102	Electrical Machines-I	3	1	0	4
5	R20EEE2103	Electro Magnetic Fields	3	0	0	3
6	R20EEE21L1	Electrical Machines Lab-I	0	0	2	1
7	R20ECE21L4	Analog Electronics Lab	0	0	2	1
8	R20EEE21L2	Electrical Circuits Lab	0	0	2	1
9	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>3</b>	<b>8</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S.No	Course Code	Course Title	L	T	P	Credits
1	R20MTH2201	Laplace Transforms , Numerical Methods & Complex variables	3	1	0	4
2	R20EEE2201	Electrical Machines – II	3	1	0	4
3	R20ECE2102	Digital Logic Design	3	0	0	3
4	R20EEE2202	Control Systems	3	1	0	4
5	R20EEE2203	Power System-I	3	0	0	3
6	R20ECE21L2	Digital Logic Design Lab	0	0	2	1
7	R20EEE22L1	Electrical Machines Lab-II	0	0	2	1
8	R20EEE22L2	Control Systems Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>6</b>	<b>21</b>



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**REGULATIONS – BR20**

**B. Tech. ELECTRICAL & ELECTRONICS ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20EEE3101	Power Electronics	3	1	0	4
2	R20EEE3102	Power System-II	3	1	0	4
3	R20EEE3103	Measurements and Instrumentation	3	1	0	4
<b>Professional Elective-I</b>						
4	R20CSE3164	Computer Architecture	3	0	0	3
	R20EEE3111	High Voltage Engineering				
	R20EEE3112	Electric Machine Design				
	R20MAC3100	MOOCs-I				
5	R20MBA2201	Business Economics & Financial Analysis	3	0	0	3
6	R20EEE31L1	Power System Simulation Lab	0	0	2	1
7	R20EEE31L2	Power Electronics Lab	0	0	2	1
8	R20EEE31L3	Measurements and Instrumentation Lab	0	0	2	1
9	R20HAS31L1	Advanced Communication Skills Lab	0	0	2	1
<b>Total Credits</b>			<b>15</b>	<b>3</b>	<b>8</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No	Course Code	Course Title	L	T	P	Credits
1		Open Elective-I	3	0	0	3
<b>Professional Elective-II</b>						
2	R20ECE3202	Digital signal processing	3	0	0	3
	R20EEE3221	Power Semiconductor Drives				
	R20EEE3222	Wind and Solar Energy systems				
	R20MAC3200	MOOCs-II				
3	R20ECE2103	Signals and Systems	2	1	0	3
4	R20ECE3101	Microprocessors & Microcontrollers	3	0	0	3
5	R20EEE3201	Power System Protection	3	1	0	4
6	R20EEE3202	Power System Operation and Control	3	0	0	3
7	R20EEE32L1	Power System Lab	0	0	2	1
8	R20ECE31L1	Microprocessors & Microcontrollers Lab	0	0	2	1
9	R20ECE32L4	Signals and Systems Lab	0	0	2	1
<b>Total Credits</b>			<b>17</b>	<b>2</b>	<b>6</b>	<b>22</b>



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**REGULATIONS – BR20**

**B. Tech. ELECTRICAL & ELECTRONICS ENGINEERING**

**IV YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective-II	3	0	0	3
<b>Professional Elective-III</b>						
2	R20EEE4131	Digital Control systems	3	0	0	3
	R20EEE4132	Optimization Techniques				
	R20EEE4133	Electrical and Hybrid Vehicles				
<b>Professional Elective-IV</b>						
3	R20EEE4141	HVDC Transmission	3	1	0	4
	R20EEE4142	Power System Reliability				
	R20EEE4143	Industrial Electrical Systems				
4	R20MBA4101	Fundamentals of Management for Engineers	3	0	0	3
5	R20EEE41L1	Electrical & Electronics Design Lab	0	0	3	1.5
6	R20EEE41L2	Technical Seminar	0	0	3	1.5
7	R20EEE41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	4	2
8	R20EEE41P2	Comprehensive Viva-voce	0	0	6	3
		<b>Total Credits</b>	<b>12</b>	<b>1</b>	<b>16</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective-III	3	0	0	3
<b>Professional Elective-V</b>						
2	R20EEE4251	Power Quality & FACTS	3	0	0	3
	R20EEE4252	Control System Design				
	R20CSE4265	AI Techniques in Electrical Engineering				
<b>Professional Elective-VI</b>						
3	R20EEE4261	Smart Grid Technologies	3	0	0	3
	R20EEE4262	Electrical Distribution Systems				
	R20EEE4263	Advanced Control of Electric Drives				
4	R20EEE42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

\*MC – Satisfied/Unsatisfied



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## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R20CSE3272	Database Concepts				
3	R20ECE3273	Consumer Electronics				
4	R20EEE3274	Electrical Estimation & Costing				
5	R20INF3275	Information Technology Essentials				
6	R20MED3276	Introduction to Robotics				
7	R20HMS3277	Fundamentals of Entrepreneurship				
8	R20HMS3278	Day to Day Biology				
9.	R20CIV3272	Building Architecture				

### Open Elective –II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4181	Green Building Engineering	3	0	0	3
2	R20CSE4182	Cyber Security Fundamentals				
3	R20ECE4183	Principles of Modern Communication Systems				
4	R20EEE4184	Illumination Engineering				
5	R20INF4185	E-Commerce				
6	R20MED4186	Industrial Design & Ergonomics				
7	R20HMS4187	Creative Writing				
8	R20HMS4188	Design Thinking				
9.	R20CIV4182	Pre Fabricated Structures				
10		MOOCs – III				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4291	Spatial Technology Concepts	3	0	0	3
2	R20CSE4292	Fundamentals of Soft Computing				
3	R20ECE4293	Audio & Video Engineering				
4	R20EEE4294	Non Conventional Energy Resources				
5	R20INF4295	Information Security Fundamentals				
6	R20MED4296	Total Engineering Quality Management				
7	R20HMS4297	Human Values & Professional Ethics for Engineers				
8	R20HMS4298	Science Fiction				
9	R20CIV4292	Building Infrastructure Auditing				
10		MOOCs - IV				



  
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# **Department of Mechanical Engineering (BR20)**

# SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC, New Delhi)

## Choice Based Credit System (CBCS)

REGULATIONS – BR20

### B. Tech. Mechanical ENGINEERING

(Common to ME & CIVIL)

#### I YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20EPH1101	Engineering Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EPH11L1	Engineering Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20HAS1102	Environmental Science	3	0	0	0
8	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

#### I YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20MED1103	Engineering Mechanics	3	1	0	4
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills Lab	0	0	2	1
8	R20COI1101	Constitution of India	3	0	0	0
9	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>19</b>



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**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. Mechanical ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH2102	Probability Distribution & Complex Variables	3	1	0	4
2	R20MED2101	Mechanics of Solids	3	1	0	4
3	R20MED2102	Material Science & Metallurgy	3	0	0	3
4	R20MED2103	Production Technology	3	0	0	3
5	R20MED2104	Thermodynamics	3	1	0	4
6	R20MED21L1	Production Technology Lab	0	0	2	1
7	R20MED21L2	Machine Drawing Practice	0	0	2	1
8	R20MED21L3	Material Science & Mechanics of Solids Lab	0	0	2	1
9	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>3</b>	<b>8</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S.No	Course Code	Course Title	L	T	P	Credits
1	R20EEE2204	Basics of Electrical & Electronics Engineering	3	0	0	3
2	R20MED2201	Kinematics of Machinery	3	1	0	4
3	R20MED2202	Thermal Engineering-I	3	1	0	4
4	R20MED2203	Fluid Mechanics & Hydraulic Machines	3	1	0	4
5	R20MED2204	Instrumentation & Control Systems	3	0	0	3
6	R20EEE22L3	Electrical & Electronics Lab	0	0	2	1
7	R20MED22L1	Fluid Mechanics & Hydraulic Machines Lab	0	0	2	1
8	R20MED22L2	Instrumentation & Control Systems Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>6</b>	<b>21</b>



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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. MECHANICAL ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MED3101	Dynamics of Machinery	3	1	0	4
2	R20MED3102	Design of Machine Members-I	3	0	0	3
3	R20MED3103	Metrology & Machine Tools	3	0	0	3
4	R20MBA2201	Business Economics & Financial Analysis	3	0	0	3
5	R20MED3104	Thermal Engineering-II	3	0	0	3
6	R20MTH3101	Operations Research	3	0	0	3
7	R20MED31L1	Thermal Engineering Lab	0	0	2	1
8	R20MED31L2	Metrology & Machine Tools Lab	0	0	2	1
9	R20MED31L3	Kinematics & Dynamics Lab	0	0	2	1
10	R20MAC3100	MOOCs-I	0	0	2	0
11	R20CSE3124	Cyber Security	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>1</b>	<b>8</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No	Course Code	Course Title	L	T	P	Credits
1	R20MED3201	Design of Machine Members-II	3	0	0	3
2	R20MED3202	Heat Transfer	3	1	0	4
3	R20MED3203	CAD & CAM	3	0	0	3
<b>Professional Elective – I</b>						
4	R20MED3211	Unconventional Machining Processes	3	0	0	3
	R20MED3212	Machine Tool Design				
	R20MED3213	Production Planning & Control				
	R20MAC3200	MOOCs-II				
5		Open Elective – I	3	0	0	3
6	R20MED3204	Finite Element Methods	3	0	0	3
7	R20MED32L1	Heat Transfer Lab	0	0	2	1
8	R20MED32L2	CAD & CAM Lab	0	0	2	1
9	R20HAS31L1	Advanced Communication Skills lab	0	0	2	1
		<b>Total Credits</b>	<b>18</b>	<b>1</b>	<b>8</b>	<b>22</b>



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**REGULATIONS – BR20**

**B. Tech. MECHANICAL ENGINEERING**

**IV YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MED4101	Refrigeration & Air Conditioning	3	1	0	4
<b>Professional Elective – II</b>						
2	R20MED4121	Additive Manufacturing	3	0	0	3
	R20MED4122	Automation in Manufacturing				
	R20MED4123	Micro Electro Mechanical Systems (MEMS)				
<b>Professional Elective – III</b>						
3	R20MED4131	Power Plant Engineering	3	1	0	4
	R20MED4132	Automobile Engineering				
	R20MED4133	Renewable Energy Sources				
<b>Professional Elective – IV</b>						
4	R20MED4141	Computational Fluid Dynamics	3	0	0	3
	R20MED4142	Turbo Machinery				
	R20MED4143	Fluid Power Systems				
5		Open Elective - II	3	0	0	3
6	R20MED41L1	Technical Seminar	0	0	2	1
7	R20MED41P2	Comprehensive Viva-voce	0	0	2	1
8	R20MED41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>4</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for valuation.

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
<b>Professional Elective – V</b>						
1	R20MED4251	Industrial Robotics	3	0	0	3
	R20MED4252	Mechanical Vibrations				
	R20MED4253	Composite Materials				
<b>Professional Elective – VI</b>						
2	R20MED4261	Industrial Management	3	0	0	3
	R20MED4262	Production Operation and Management				
	R20MED4263	Nanotechnology & Application				
3		Open Elective - III	3	0	0	3
4	R20ECE42P1	Project Work	0	0	14	7
<b>Total Credits</b>			<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

\*MC – Satisfied/Unsatisfied

## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R20CSE3272	Database Concepts				
3	R20ECE3273	Consumer Electronics				
4	R20EEE3274	Electrical Estimation & Costing				
5	R20INF3275	Information Technology Essentials				
6	R20MED3276	Introduction to Robotics				
7	R20HMS3277	Fundamentals of Entrepreneurship				
8	R20HMS3278	Day to Day Biology				

### Open Elective –II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4181	Green Building Engineering	3	0	0	3
2	R20CSE4182	Cyber Security Fundamentals				
3	R20ECE4183	Principles of Modern Communication Systems				
4	R20EEE4184	Illumination Engineering				
5	R20INF4185	E-Commerce				
6	R20MED4186	Industrial Design & Ergonomics				
7	R20HMS4187	Creative Writing				
8	R20HMS4188	Design Thinking				
9.		MOOC - III				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4293	Remote Sensing Concepts	3	0	0	3
2	R20CSE4292	Fundamentals of Soft Computing				
3	R20ECE4293	Audio & Video Engineering				
4	R20EEE4294	Non Conventional Energy Resources				
5	R20INF4295	Information Security Fundamentals				
6	R20MED4296	Total Engineering Quality Management				
7	R20HMS4297	Human Values & Professional Ethics for Engineers				
8	R20HMS4298	Science Fiction				
9		MOOC - IV				

**Department of**

**ECE**

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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20HAS1102	Environmental Science	3	0	0	0
8	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills Lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20COI1101	Constitution of India	3	0	0	0
10	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>10</b>	<b>19</b>



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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE2101	Electronic Devices and Circuits	3	1	0	4
2	R20EEE2104	Network Theory	3	0	0	3
3	R20ECE2102	Digital Logic Design	3	0	0	3
4	R20ECE2103	Signals and Systems	3	1	0	4
5	R20ECE2104	Probability Theory and Stochastic Processes	3	0	0	3
6	R20ECE21L1	Electronic Devices and Circuits Lab	0	0	3	1.5
7	R20ECE21L2	Digital Logic Design Lab	0	0	3	1.5
8	R20ECE21L3	Basic Simulation Lab	0	0	2	1
9	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH2201	Laplace Transforms, Numerical Methods & Complex Variables	3	1	0	4
2	R20ECE2201	Electromagnetic Theory And Transmission Lines	3	0	0	3
3	R20ECE2202	Analog and Digital Communications	3	1	0	4
4	R20ECE2203	Linear and Digital IC Applications	3	0	0	3
5	R20ECE2204	Electronic Circuit Analysis	3	0	0	3
6	R20ECE22L1	Analog and Digital Communications Lab	0	0	3	1.5
7	R20ECE22L2	IC Applications Lab	0	0	3	1.5
8	R20ECE22L3	Electronic Circuit Analysis Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



  
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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MBA2201	Business Economics & Financial Analysis	3	0	0	3
2	R20ECE3101	Microprocessors & Microcontrollers	3	1	0	4
3	R20INF3103	Data Communications and Networks	3	1	0	4
4	R20EEE2202	Control Systems	3	1	0	4
<b>Professional Elective – I</b>						
5	R20CSE3114	Computer Organization & Operating Systems	3	0	0	3
	R20ECE3112	Coding Theory & Techniques				
	R20ECE3113	Electronic Measurements & Instrumentation				
	R20MAC3100	MOOCs-I				
6	R20ECE31L1	Microprocessors & Microcontrollers Lab	0	0	3	1.5
7	R20INF31L2	Data Communications and Networks Lab	0	0	3	1.5
8	R20HAS31L1	Advanced Communication Skills Lab	0	0	2	1
<b>Total Credits</b>			<b>15</b>	<b>3</b>	<b>8</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE3201	Antennas and Wave Propagation	3	1	0	4
2	R20ECE3202	Digital Signal Processing	3	1	0	4
3	R20ECE3203	VLSI Design	3	1	0	4
<b>Professional Elective - II</b>						
4	R20ECE3221	Embedded System Design	3	0	0	3
	R20CSE4152	Internet of Things (IOT)				
	R20CSE3201	Machine Learning				
	R20MAC3200	MOOCs-II				
5		Open Elective - I	3	0	0	3
6	R20ECE32L1	Digital Signal Processing Lab	0	0	3	1.5
7	R20ECE32L2	VLSI & e-CAD Design Lab	0	0	3	1.5
8	R20ECE32L3	Technical Seminar	0	0	2	1
<b>Total Credits</b>			<b>15</b>	<b>3</b>	<b>8</b>	<b>22</b>



  
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## Choice Based Credit System (CBCS)

### REGULATIONS – BR20

#### B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING

#### IV YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE4101	Microwave and Optical Communication	3	1	0	4
2	R20HAS4101	Professional Practice, Law & Ethics	2	0	0	2
<b>Professional Elective – III</b>						
3	R20ECE4131	Digital Image Processing	3	1	0	4
	R20CSE4101	Cryptography and Network Security				
	R20CSE3122	Artificial Intelligence (AI)				
<b>Professional Elective – IV</b>						
4	R20ECE4141	Cellular & Mobile Communications	3	1	0	4
	R20ECE4142	Digital Signal Processors & Architectures				
	R20ECE4143	System on Chip Architecture				
5		Open Elective - II	3	0	0	3
6	R20ECE41L1	Microwave & Optical Communications Lab	0	0	2	1
7	R20ECE41P2	Comprehensive Viva Voce	0	0	2	1
8	R20ECE41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
<b>Total Credits</b>			<b>14</b>	<b>3</b>	<b>4</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

**Note:** Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

#### IV YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
<b>Professional Elective – V</b>						
1	R20ECE4251	Satellite Communications	3	0	0	3
	R20ECE4252	Low Power VLSI				
	R20ECE4253	Wireless Sensor Networks				
<b>Professional Elective – VI</b>						
2	R20ECE4261	Wireless Communication & Networks	3	0	0	3
	R20ECE4262	Electronic Product Design & Packaging				
	R20ECE4263	Radar Systems				
3		Open Elective - III	3	0	0	3
4	R20ECE42P1	Project Work	0	0	14	7
<b>Total Credits</b>			<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

\*MC – Satisfied/Unsatisfied



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## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R20CSE3272	Database Concepts				
3	R20ECE3273	Consumer Electronics				
4	R20EEE3274	Electrical Estimation & Costing				
5	R20INF3275	Information Technology Essentials				
6	R20MED3276	Introduction to Robotics				
7	R20HMS3277	Fundamentals of Entrepreneurship				
8	R20HMS3278	Day to Day Biology				

### Open Elective –II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4181	Green Building Engineering	3	0	0	3
2	R20CSE4182	Cyber Security Fundamentals				
3	R20ECE4183	Principles of Modern Communication Systems				
4	R20EEE4184	Illumination Engineering				
5	R20INF4185	E-Commerce				
6	R20MED4186	Industrial Design & Ergonomics				
7	R20HMS4187	Creative Writing				
8	R20HMS4188	Design Thinking				
9.		MOOC - III				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CIV4293	Remote Sensing Concepts	3	0	0	3
2	R20CSE4292	Fundamentals of Soft Computing				
3	R20ECE4293	Audio & Video Engineering				
4	R20EEE4294	Non Conventional Energy Resources				
5	R20INF4295	Information Security Fundamentals				
6	R20MED4296	Total Engineering Quality Management				
7	R20HMS4297	Human Values & Professional Ethics for Engineers				
8	R20HMS4298	Science Fiction				
9		MOOC - IV				

**Department of  
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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. COMPUTER SCIENCE & ENGINEERING**

**Common to EEE, CSE, CSIT, CSE(DS), CSE(CS), CSE(AIML), CSE(IOT) & IT**  
**I YEAR I SEMESTER COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



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**REGULATIONS – BR20**

**B. Tech. COMPUTER SCIENCE & ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE2105	Analog Electronics	3	0	0	3
2	R20CSE2101	Data Structures	3	0	0	3
3	R20MTH2103	Probability & Statistical Methods	4	0	0	4
4	R20CSE2102	Computer Organization & Architecture	3	0	0	3
5	R20CSE2103	Object Oriented Programming using C++	3	0	0	3
6	R20ECE21L4	Analog Electronics Lab	0	0	2	1
7	R20CSE21L1	Data Structures Lab	0	0	3	1.5
8	R20CSE21L2	IT Workshop Lab	0	0	3	1.5
9	R20CSE21L3	C++ Programming Lab	0	0	2	1
10	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>1</b>	<b>12</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2201	Discrete Mathematics	3	0	0	3
2	R20ECE2102	Digital Logic Design	3	0	0	3
3	R20CSE2202	Operating Systems	3	0	0	3
4	R20CSE2203	Database Management Systems	3	1	0	4
5	R20CSE2204	Java Programming	3	1	0	4
6	R20CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R20CSE22L2	Database Management Systems Lab	0	0	3	1.5
8	R20CSE22L3	Java Programming Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



  
**PRINCIPAL**  
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 (VITE: SHERIGUDA-501 5&O,  
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**Department of  
Information Technology  
(BR20)**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - INFORMATION TECHNOLOGY**

**Common to EEE, CSE & IT**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - INFORMATION TECHNOLOGY**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE2105	Analog Electronics	3	0	0	3
2	R20CSE2101	Data Structures	3	0	0	3
3	R20MTH2103	Probability & Statistical Methods	4	0	0	4
4	R20CSE2102	Computer Organization & Architecture	3	0	0	3
5	R20CSE2103	Object Oriented Programming using C++	3	0	0	3
6	R20ECE21L4	Analog Electronics Lab	0	0	2	1
7	R20CSE21L1	Data Structures Lab	0	0	3	1.5
8	R20CSE21L2	IT Workshop Lab	0	0	3	1.5
9	R20CSE21L3	C++ Programming Lab	0	0	2	1
10	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>1</b>	<b>12</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2201	Discrete Mathematics	3	0	0	3
2	R20ECE2102	Digital Logic Design	3	0	0	3
3	R20CSE2202	Operating Systems	3	0	0	3
4	R20CSE2203	Database Management Systems	3	1	0	4
5	R20CSE2204	Java Programming	3	1	0	4
6	R20CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R20CSE22L2	Database Management Systems Lab	0	0	3	1.5
8	R20CSE22L3	Java Programming Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



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Sri Indu College of Engineering and Technology  
(VII): SHERGUDA-501 510,  
Ibrahimpatnem(M), R.R.Dist.

**Department of**  
**Computer Science & Information Technology**  
**(BR20)**



**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - COMPUTER SCIENCE & INFORMATION TECHNOLOGY**  
**Common to EEE, CSE & IT**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



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Sri Indu College of Engineering and Technology  
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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - COMPUTER SCIENCE & INFORMATION TECHNOLOGY**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE2105	Analog Electronics	3	0	0	3
2	R20CSE2101	Data Structures	3	0	0	3
3	R20MTH2103	Probability & Statistical Methods	4	0	0	4
4	R20CSE2102	Computer Organization & Architecture	3	0	0	3
5	R20CSE2103	Object Oriented Programming using C++	3	0	0	3
6	R20ECE21L4	Analog Electronics Lab	0	0	2	1
7	R20CSE21L1	Data Structures Lab	0	0	3	1.5
8	R20CSE21L2	IT Workshop Lab	0	0	3	1.5
9	R20CSE21L3	C++ Programming Lab	0	0	2	1
10	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
<b>Total Credits</b>			<b>15</b>	<b>1</b>	<b>12</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2201	Discrete Mathematics	3	0	0	3
2	R20ECE2102	Digital Logic Design	3	0	0	3
3	R20CSE2202	Operating Systems	3	0	0	3
4	R20CSE2203	Database Management Systems	3	1	0	4
5	R20CSE2204	Java Programming	3	1	0	4
6	R20CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R20CSE22L2	Database Management Systems Lab	0	0	3	1.5
8	R20CSE22L3	Java Programming Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
<b>Total Credits</b>			<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



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(VVI): SHERIGUDA-501 510,  
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**Department of**  
**Data Science**  
**(BR20)**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - CSE (DATA SCIENCE)**

**Common to EEE, CSE & IT**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - CSE (DATA SCIENCE)**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2201	Discrete Mathematics	3	0	0	3
2	R20CSE2101	Data Structures	3	0	0	3
3	R20MTH2104	Mathematical and Statistical Foundations	3	1	0	4
4	R20CSE2102	Computer Organization & Architecture	3	0	0	3
5	R20CSE2104	Python Programming	2	0	0	2
6	R20MBA2201	Business Economics & Financial Analysis	3	0	0	3
7	R20CSE21L1	Data Structures Lab	0	0	3	1.5
8	R20CSE21L4	Python Programming Lab	0	0	3	1.5
9	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>17</b>	<b>1</b>	<b>8</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2206	Formal Language and Automata Theory	3	0	0	3
2	R20CSE2207	Software Engineering	3	0	0	3
3	R20CSE2202	Operating Systems	3	0	0	3
4	R20CSE2203	Database Management Systems	3	1	0	4
5	R20CSE2204	Java Programming	3	1	0	4
6	R20CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R20CSE22L2	Database Management Systems Lab	0	0	3	1.5
8	R20CSE22L3	Java Programming Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



  
**PRINCIPAL**  
 Sri Indu College of Engineering and Technology  
 (VII): SHERIGUDA-501 580,  
 Ibrahimpatnem(M), R.R.Dist.

# **Department of Cyber Security**

**(BR20)**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - CSE (CYBER SECURITY)**

**Common to EEE, CSE & IT**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



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**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
 (An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - CSE (CYBER SECURITY)**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE2106	Analog and Digital Electronics	3	0	0	3
2	R20CSE2101	Data Structures	3	0	0	3
3	R20MTH2104	Mathematical and Statistical Foundations	3	1	0	4
4	R20CSE2102	Computer Organization & Architecture	3	0	0	3
5	R20CSE2104	Python Programming	2	0	0	2
6	R20ECE21L5	Analog and Digital Electronics Lab	0	0	3	1.5
7	R20CSE21L1	Data Structures Lab	0	0	3	1.5
8	R20CSE21L2	IT Workshop Lab	0	0	3	1.5
9	R20CSE21L4	Python Programming Lab	0	0	3	1.5
10	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>14</b>	<b>1</b>	<b>14</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2201	Discrete Mathematics	3	0	0	3
2	R20MBA2201	Business Economics & Financial Analysis	3	0	0	3
3	R20CSE2202	Operating Systems	3	0	0	3
4	R20CSE2205	Computer Networks	3	1	0	4
5	R20CSE2204	Java Programming	3	1	0	4
6	R20CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R20CSE22L4	Computer Networks Lab	0	0	3	1.5
8	R20CSE22L3	Java Programming Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0



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**PRINCIPAL**  
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**Department of  
Internet of Things  
(BR20)**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - CSE (INTERNET OF THINGS (IoT))**

**Common to EEE, CSE & IT**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



*Sri Indu*  
**PRINCIPAL**  
Sri Indu College of Engineering and Technology  
(VIT): SHERIGUDA-501 520,  
Ibrahimpatnem(M), R.R. Dist.

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. - CSE (INTERNET OF THINGS (IoT))**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20ECE2106	Analog and Digital Electronics	3	0	0	3
2	R20CSE2101	Data Structures	3	0	0	3
3	R20MTH2103	Probability & Statistical Methods	4	0	0	4
4	R20CSE2201	Discrete Mathematics	3	0	0	3
5	R20CSE2104	Python Programming	2	0	0	2
6	R20ECE21L5	Analog and Digital Electronics Lab	0	0	3	1.5
7	R20CSE21L1	Data Structures Lab	0	0	3	1.5
8	R20CSE21L2	IT Workshop Lab	0	0	3	1.5
9	R20CSE21L4	Python Programming Lab	0	0	3	1.5
10	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>0</b>	<b>14</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2102	Computer Organization & Architecture	3	0	0	3
2	R20MBA2201	Business Economics & Financial Analysis	3	0	0	3
3	R20CSE2202	Operating Systems	3	0	0	3
4	R20CSE2205	Computer Networks	3	1	0	4
5	R20CSE2204	Java Programming	3	1	0	4
6	R20CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R20CSE22L4	Computer Networks Lab	0	0	3	1.5
8	R20CSE22L3	Java Programming Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0



*Sri Indu*  
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Sri Indu College of Engineering and Technology  
(M): SHERIGUDA-501 510,  
Ibrahimpatnem(M), R.R. Dist.

**Department of**  
**Artificial Intelligence & Machine Learning**  
**(BR20)**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. CSE (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)**

**Common to EEE, CSE & IT**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R20ECH1101	Chemistry	3	1	0	4
3	R20EEE1101	Basic Electrical Engineering	3	0	0	3
4	R20MED1101	Engineering Workshop	1	0	3	2.5
5	R20HAS1101	English	2	0	0	2
6	R20ECH11L1	Engineering Chemistry Lab	0	0	3	1.5
7	R20HAS11L2	English Language and Communication Skills lab	0	0	2	1
8	R20EEE11L3	Basic Electrical Engineering Lab	0	0	2	1
9	R20HAS1102	Environmental Science	3	0	0	0
10	R20IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R20EAP1201	Applied Physics	3	1	0	4
3	R20CSE1101	Programming for Problem Solving	3	1	0	4
4	R20MED1102	Engineering Graphics	1	0	4	3
5	R20EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R20CSE11L2	Programming for Problem Solving Lab	0	0	3	1.5
7	R20COI1101	Constitution of India	3	0	0	0
8	R20ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>



*Sush*  
**PRINCIPAL**  
Sri Indu College of Engineering and Technology  
(M): SHERIGUDA-501 510,  
Ibrahimpatnam(M), R.R. Dist.

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR20**

**B. Tech. CSE (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)**  
**II YEAR I SEMESTER** **COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2201	Discrete Mathematics	3	0	0	3
2	R20CSE2101	Data Structures	3	0	0	3
3	R20MTH2104	Mathematical and Statistical Foundations	3	1	0	4
4	R20CSE2102	Computer Organization & Architecture	3	0	0	3
5	R20CSE2104	Python Programming	2	0	0	2
6	R20MBA2201	Business Economics & Financial Analysis	3	0	0	3
7	R20CSE21L1	Data Structures Lab	0	0	3	1.5
8	R20CSE21L4	Python Programming Lab	0	0	3	1.5
9	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)	0	0	2	0
		<b>Total Credits</b>	<b>17</b>	<b>1</b>	<b>8</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R20CSE2206	Formal Language and Automata Theory	3	0	0	3
2	R20CSE2207	Software Engineering	3	0	0	3
3	R20CSE2202	Operating Systems	3	0	0	3
4	R20CSE2203	Database Management Systems	3	1	0	4
5	R20CSE2204	Java Programming	3	1	0	4
6	R20CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R20CSE22L2	Database Management Systems Lab	0	0	3	1.5
8	R20CSE22L3	Java Programming Lab	0	0	2	1
9	R20MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



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(M): SHERIGUDA-501 510,  
Ibrahimpatnam(M), R.R. Dist.

# **CIVIL ENGINEERING**

(BR18)

**CIVIL ENGINEERING**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR-18**

**B. Tech. CIVIL ENGINEERING**  
**(Common to ME & CIVIL)**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R18EPH1101	Engineering Physics	3	1	0	4
3	R18CSE1101	Programming for Problem Solving	3	1	0	4
4	R18MED1102	Engineering Graphics	1	0	4	3
5	R18EPH12L1	Engineering Physics Lab	0	0	3	1.5
6	R18CSE12L1	Programming for Problem Solving Lab	0	0	3	1.5
7	R18HAS1102	Environmental Science	3	0	0	0
8	R18IPG1101	Induction Programme for Three Weeks	0	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R18ECH1101	Chemistry	3	1	0	4
3	R18MED1103	Engineering Mechanics	3	1	0	4
4	R18MED1101	Engineering Workshop	1	0	3	2.5
5	R18HAS1101	English	2	0	0	2
6	R18ECH12L1	Engineering Chemistry Lab	0	0	3	1.5
7	R18HAS12L1	English Language and Communication Skills Lab	0	0	2	1
8	R18COI1101	Constitution of India	3	0	0	0
9	R18ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>19</b>





**CIVIL ENGINEERING**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR-18**

**B. Tech. CIVIL ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV2101	Surveying & Geomatics	3	0	0	3
2	R18MED2105	Hydraulics and Hydraulic Machinery	3	0	0	3
3	R18CIV2102	Strength of Materials-I	3	1	0	4
4	R18MTH2102	Probability Distributions and Statistical Methods	3	0	0	3
5	R18MED2106	Fluid Mechanics	3	0	0	3
6	R18CIV21L1	Surveying Lab	1	0	3	2
7	R18CIV21L2	Strength of Materials Lab	0	0	3	1.5
8	R18MED21L4	Hydraulics & Hydraulic Machinery Lab	0	0	3	1.5
9	R18MAC2100	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>16</b>	<b>1</b>	<b>11</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S.No	Course Code	Course Title	L	T	P	Credits
1	R18EEE2205	Basics of Electrical & Electronics Engineering	3	0	0	3
2	R18CIV2201	Building Materials, Construction and Planning	3	0	0	3
3	R18CIV2202	Strength of Materials-II	3	1	0	4
4	R18CIV2203	Structural Analysis -I	3	1	0	4
5	R18CIV2204	Engineering Geology	3	0	0	3
6	R18CIV22L1	Computer aided Civil Engineering Drawing	0	0	3	1.5
7	R18CIV22L2	Engineering Geology lab	0	0	2	1
8	R18EEE22L5	Electrical & Electronics Lab	0	0	3	1.5
9	R18MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>

**CIVIL ENGINEERING**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**

(An Autonomous Institution under UGC, New Delhi)

**Choice Based Credit System (CBCS)**

**REGULATIONS – BR-18**

**B. Tech. CIVIL ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P/D	Credits
1	R18CIV3101	Structural Analysis-II	3	1	0	4
2	R18CIV3102	Geotechnical Engineering	3	1	0	4
3	R18CIV3103	Structural Engineering –I(RCC)	3	1	0	4
4	R18CIV3104	Transportation Engineering-I	3	1	0	4
<b>Professional Elective-I</b>						
5	R18CIV3111	Concrete Technology	3	0	0	3
	R18MBA3112	Management Fundamentals for Engineers				
	R18CIV3113	Basics of Mechanical Engineering				
6	R18CIV31L1	Highway Engineering and Concrete Technology Lab	0	0	2	1
7	R18CIV31L2	Geotechnical Engineering Lab	0	0	2	1
8	R18HAS31L1	Advanced Communication Skills Lab	0	0	2	1
9	R18MAC3100	MOOCs-I	0	0	2	0
<b>Total Credits</b>			<b>15</b>	<b>4</b>	<b>8</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No	Course Code	Course Title	L	T	P	Credits
1	R18CIV3201	Hydrology & Water Resources Engineering	3	1	0	4
2	R18CIV3202	Environmental Engineering	3	0	0	3
3	R18MBA3201	Engineering Economics & Accounting	3	0	0	3
4	R18CIV3203	Structural Engineering –II(Steel)	3	1	0	4
<b>Professional Elective –II</b>						
5	R18CIV3221	Prestressed Concrete Structures	3	0	0	3
	R18CIV3222	Elements of Earth Quake Engineering				
	R18CIV3223	Finite Element Methods				
6		<b>Open Elective –I</b>	3	0	0	3
7	R18CIV32L1	Environmental Engineering Lab	0	0	2	1
8	R18CIV32L2	Computer Aided Design Lab	0	0	2	1
9	R18MAC3200	MOOCs-II	0	0	2	0
<b>Total Credits</b>			<b>18</b>	<b>2</b>	<b>6</b>	<b>22</b>

**\*MC - Environmental Science – Should be Registered by Lateral Entry Students Only.**

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**REGULATIONS – BR18**

**B. Tech. - CIVIL ENGINEERING**

**IV YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4101	Estimation, Costing and Project Management	3	0	0	3
2	R18CIV4102	Transportation Engineering-II	3	0	0	3
<b>Professional Elective –III</b>						
3	R18CIV4131	Remote Sensing &GIS	3	0	0	3
	R18CIV4132	Ground Improvement Techniques				
	R18CIV4133	Advance Structural Analysis				
<b>Professional Elective –IV</b>						
4	R18CIV4141	Irrigation and Hydraulic Structures	3	0	0	3
	R18CIV4142	Theory of Elasticity				
	R18CIV4143	Ground water Hydrology				
5		<b>Open Elective –II</b>	3	0	0	3
6	R18CIV41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
7	R18CIV41L1	Seminar	0	0	2	1
8	R18CIV41P2	Comprehensive Viva-voce	0	0	6	3
		<b>Total Credits</b>	<b>15</b>	<b>0</b>	<b>8</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
<b>Professional Elective -V</b>						
1	R18CIV4251	Foundation Engineering	3	0	0	3
	R18CIV4252	Environmental Impact Assessment				
	R18CIV4253	Air pollution				
<b>Professional Elective –VI</b>						
2	R18CIV4261	Airports, railways and water ways	3	0	0	3
	R18CIV4262	Intelligent Transportation Systems				
	R18CIV4263	Urban Transportation Planning				
3		<b>Open Elective –III</b>	3	0	0	3
4	R18CIV42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R18CSE3272	Database Concepts				
3	R18ECE3273	Consumer Electronics				
4	R18EEE3274	Electrical Estimation & Costing				
5	R18INF3275	Information Technology Essentials				
6	R18MED3276	Introduction to Robotics				
7	R18HMS3277	Fundamentals of Entrepreneurship				
8	R18HMS3278	Day to Day Biology				

### Open Elective –II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4181	Green Building Engineering	3	0	0	3
2	R18CSE4182	Cyber Security Fundamentals				
3	R18ECE4183	Principles of Modern Communication Systems				
4	R18EEE4184	Illumination Engineering				
5	R18INF4185	E-Commerce				
6	R18MED4186	Industrial Design & Ergonomics				
7	R18HMS4187	Creative Writing				
8	R18HMS4188	Design Thinking				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4291	Remote Sensing Concepts	3	0	0	3
2	R18CSE4292	Fundamentals of Soft Computing				
3	R18ECE4293	Audio & Video Engineering				
4	R18EEE4294	Non Conventional Energy Resources				
5	R18INF4295	Information Security Fundamentals				
6	R18MED4296	Total Engineering Quality Management				
7	R18HMS4297	Human Values & Professional Ethics for Engineers				
8	R18HMS4298	Science Fiction				

# **MECHANICAL ENGINEERING**

(BR18)

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - MECHANICAL ENGINEERING**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R18EPH1101	Engineering Physics	3	1	0	4
3	R18CSE1101	Programming for Problem Solving	3	1	0	4
4	R18MED1102	Engineering Graphics	1	0	4	3
5	R18EPH12L1	Engineering Physics Lab	0	0	3	1.5
6	R18CSE12L1	Programming for Problem Solving Lab	0	0	3	1.5
7	R18HAS1102	Environmental Science	3	0	0	0
8	R18IPG1101	Induction Programme for Three Weeks	0	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R18ECH1101	Chemistry	3	1	0	4
3	R18MED1103	Engineering Mechanics	3	1	0	4
4	R18MED1101	Engineering Workshop	1	0	3	2.5
5	R18HAS1101	English	2	0	0	2
6	R18ECH12L1	Engineering Chemistry Lab	0	0	3	1.5
7	R18HAS12L1	English Language and Communication Skills Lab	0	0	2	1
8	R18COI1101	Constitution of India	3	0	0	0
9	R18ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>19</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - MECHANICAL ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH2101	Probability Distribution & Complex Variables	3	1	0	4
2	R18MED2101	Mechanics of Solids	3	1	0	4
3	R18MED2102	Material Science & Metallurgy	3	0	0	3
4	R18MED2103	Production Technology	3	0	0	3
5	R18MED2104	Thermodynamics	3	1	0	4
6	R18MED21L1	Production Technology Lab	0	0	2	1
7	R18MED21L2	Machine Drawing Practice	0	0	2	1
8	R18MED21L3	Material Science & Mechanics of Solids Lab	0	0	2	1
9	R18MAC2100	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>3</b>	<b>8</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S.No	Course Code	Course Title	L	T	P	Credits
1	R18EEE2205	Basics of Electrical & Electronics Engineering	3	0	0	3
2	R18MED2201	Kinematics of Machinery	3	1	0	4
3	R18MED2202	Thermal Engineering-I	3	1	0	4
4	R18MED2203	Fluid Mechanics & Hydraulic Machines	3	1	0	4
5	R18MED2204	Instrumentation & Control Systems	3	0	0	3
6	R18EEE22L4	Basics of Electrical & Electronics Lab	0	0	2	1
7	R18MED22L1	Fluid Mechanics & Hydraulic Machines Lab	0	0	2	1
8	R18MED22L2	Instrumentation & Control Systems Lab	0	0	2	1
10	R18MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>6</b>	<b>21</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - MECHANICAL ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MED3101	Dynamics of Machinery	3	1	0	4
2	R18MED3102	Design of Machine Members-I	3	0	0	3
3	R18MED3103	Metrology & Machine Tools	3	0	0	3
4	R18MBA2201	Business Economics & Financial Analysis	3	0	0	3
5	R18MED3104	Thermal Engineering-II	3	0	0	3
6	R18MTH3101	Operations Research	3	0	0	3
7	R18MED31L1	Thermal Engineering Lab	0	0	2	1
8	R18MED31L2	Metrology & Machine Tools Lab	0	0	2	1
9	R18MED31L3	Kinematics & Dynamics Lab	0	0	2	1
10	R18MAC3100	MOOCs-I	0	0	2	0
		<b>Total Credits</b>	<b>18</b>	<b>1</b>	<b>8</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No	Course Code	Course Title	L	T	P	Credits
1	R18MED3201	Design of Machine Members-II	3	0	0	3
2	R18MED3202	Heat Transfer	3	1	0	4
3	R18MED3203	CAD & CAM	3	0	0	3
<b>Professional Elective – I</b>						
4	R18MED3211	Unconventional Machining Processes	3	0	0	3
	R18MED3212	Machine Tool Design				
	R18MED3213	Production Planning & Control				
5		Open Elective – I	3	0	0	3
6	R18MED3204	Finite Element Methods	3	0	0	3
7	R18MED32L1	Heat Transfer Lab	0	0	2	1
8	R18MED32L2	CAD & CAM Lab	0	0	2	1
9	R18HAS31L1	Advanced Communication Skills lab	0	0	2	1
10	R18MAC3200	MOOCs-II	0	0	2	0
		<b>Total Credits</b>	<b>18</b>	<b>1</b>	<b>8</b>	<b>22</b>



**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - MECHANICAL ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MED4101	Refrigeration & Air Conditioning	3	0	0	3
<b>Professional Elective – II</b>						
2	R18MED4121	Additive Manufacturing	3	0	0	3
	R18MED4122	Automation in Manufacturing				
	R18MED4123	Micro Electro Mechanical Systems (MEMS)				
<b>Professional Elective – III</b>						
3	R18MED4131	Power Plant Engineering	3	0	0	3
	R18MED4132	Automobile Engineering				
	R18MED4133	Renewable Energy Sources				
<b>Professional Elective – IV</b>						
4	R18MED4141	Computational Fluid Dynamics	3	0	0	3
	R18MED4142	Turbo Machinery				
	R18MED4143	Fluid Power Systems				
5		Open Elective - II	3	0	0	3
6	R18MED41L1	Technical Seminar	0	0	2	1
7	R18MED41P2	Comprehensive Viva-voce	0	0	6	3
8	R18MED41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
		<b>Total Credits</b>	<b>15</b>	<b>0</b>	<b>8</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for valuation.

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
<b>Professional Elective – V</b>						
1	R18MED4251	Industrial Robotics	3	0	0	3
	R18MED4252	Mechanical Vibrations				
	R18MED4253	Composite Materials				
<b>Professional Elective – VI</b>						
2	R18MED4261	Industrial Management	3	0	0	3
	R18MED4262	Production Operation and Management				
	R18MED4263	Tribology				
3		Open Elective - III	3	0	0	3
4	R18ECE42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

\*MC – Satisfied/Unsatisfied

## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R18CSE3272	Database Concepts				
3	R18ECE3273	Consumer Electronics				
4	R18EEE3274	Electrical Estimation & Costing				
5	R18INF3275	Information Technology Essentials				
6	R18MED3276	Introduction to Robotics				
7	R18HMS3277	Fundamentals of Entrepreneurship				
8	R18HMS3278	Day to Day Biology				

### Open Elective –II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4181	Green Building Engineering	3	0	0	3
2	R18CSE4182	Cyber Security Fundamentals				
3	R18ECE4183	Principles of Modern Communication Systems				
4	R18EEE4184	Illumination Engineering				
5	R18INF4185	E-Commerce				
6	R18MED4186	Industrial Design & Ergonomics				
7	R18HMS4187	Creative Writing				
8	R18HMS4188	Design Thinking				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4291	Remote Sensing Concepts	3	0	0	3
2	R18CSE4292	Fundamentals of Soft Computing				
3	R18ECE4293	Audio & Video Engineering				
4	R18EEE4294	Non Conventional Energy Resources				
5	R18INF4295	Information Security Fundamentals				
6	R18MED4296	Total Engineering Quality Management				
7	R18HMS4297	Human Values & Professional Ethics for Engineers				
8	R18HMS4298	Science Fiction				

**ELECTRICAL & ELECTRONICS  
ENGINEERING  
(BR18)**

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - EEE**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R18ECH1101	Chemistry	3	1	0	4
3	R18EEE1101	Basic Electrical Engineering	3	0	0	3
4	R18MED1101	Engineering Workshop	1	0	3	2.5
5	R18HAS1101	English	2	0	0	2
6	R18ECH12L1	Engineering Chemistry Lab	0	0	3	1.5
7	R18HAS12L1	English Language and Communication Skills lab	0	0	2	1
8	R18EEE12L2	Basic Electrical Engineering Lab	0	0	2	1
9	R18HAS1102	Environmental Science	3	0	0	0
10	R18IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R18EAP1101	Applied Physics	3	1	0	4
3	R18CSE1101	Programming for Problem Solving	3	1	0	4
4	R18MED1102	Engineering Graphics	1	0	4	3
5	R18EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R18CSE12L1	Programming for Problem Solving Lab	0	0	3	1.5
7	R18COI1101	Constitution of India	3	0	0	0
8	R18ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - EEE**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MED1103	Engineering Mechanics	3	1	0	4
2	R18EEE2101	Electrical Circuit Analysis	3	1	0	4
3	R18ECE2105	Analog Electronics	3	0	0	3
4	R18EEE2102	Electrical Machines-I	3	1	0	4
5	R18EEE2103	Electro Magnetic Fields	3	0	0	3
6	R18EEE21L1	Electrical Machines Lab-I	0	0	2	1
7	R18ECE21L4	Analog Electronics Lab	0	0	2	1
8	R18EEE21L2	Electrical Circuits Lab	0	0	2	1
9	R18MAC2100	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>3</b>	<b>8</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S.No	Course Code	Course Title	L	T	P	Credits
1	R18MTH2201	Laplace Transforms , Numerical Methods & Complex variables	3	1	0	4
2	R18EEE2201	Electrical Machines – II	3	1	0	4
3	R18ECE2102	Digital Logic Design	3	0	0	3
4	R18EEE2202	Control Systems	3	1	0	4
5	R18EEE2203	Power System-I	3	0	0	3
6	R18ECE21L2	Digital Logic Design Lab	0	0	2	1
7	R18EEE22L1	Electrical Machines Lab-II	0	0	2	1
8	R18EEE22L2	Control Systems Lab	0	0	2	1
9	R18MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>6</b>	<b>21</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - EEE**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18EEE3101	Power Electronics	3	1	0	4
2	R18EEE3102	Power System-II	3	1	0	4
3	R18EEE3103	Measurements and Instrumentation	3	1	0	4
<b>Professional Elective-I</b>						
4	R18CSE3164	Computer Architecture	3	0	0	3
	R18EEE3111	High Voltage Engineering				
	R18EEE3112	Electric Machine Design				
5	R18MBA2201	Business Economics & Financial Analysis	3	0	0	3
6	R18EEE31L1	Power System Simulation Lab	0	0	2	1
7	R18EEE31L2	Power Electronics Lab	0	0	2	1
8	R18EEE31L3	Measurements and Instrumentation Lab	0	0	2	1
9	R18HAS31L1	Advanced Communication Skills Lab	0	0	2	1
10	R18MAC3100	MOOCs-I	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>3</b>	<b>10</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No	Course Code	Course Title	L	T	P	Credits
1		Open Elective-I	3	0	0	3
<b>Professional Elective-II</b>						
2	R18ECE3202	Digital signal processing	3	0	0	3
	R18EEE3221	Power Semiconductor Drives				
	R18EEE3222	Wind and Solar Energy systems				
3	R18ECE2103	Signals and Systems	2	1	0	3
4	R18ECE3101	Microprocessors & Microcontrollers	3	0	0	3
5	R18EEE3201	Power System Protection	3	1	0	4
6	R18EEE3202	Power System Operation and Control	3	0	0	3
7	R18EEE32L1	Power System Lab	0	0	2	1
8	R18ECE31L1	Microprocessors & Microcontrollers Lab	0	0	2	1
9	R18ECE32L4	Signals and Systems Lab	0	0	2	1
10	R18MAC3200	MOOCs-II	0	0	2	0
		<b>Total Credits</b>	<b>17</b>	<b>2</b>	<b>8</b>	<b>22</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**  
(An Autonomous Institution under UGC, New Delhi)  
**Choice Based Credit System (CBCS)**

**REGULATIONS – BR18**

**B. Tech. - EEE**

**IV YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective-II	3	0	0	3
<b>Professional Elective-III</b>						
2	R18EEE4131	Digital Control systems	3	0	0	3
	R18EEE4132	Optimization Techniques				
	R18EEE4133	Electrical and Hybrid Vehicles				
<b>Professional Elective-IV</b>						
3	R18EEE4141	HVDC Transmission	3	0	0	3
	R18EEE4142	Power System Reliability				
	R18EEE4143	Industrial Electrical Systems				
4	R18MBA4101	Fundamentals of Management for Engineers	3	0	0	3
5	R18EEE41L1	Electrical & Electronics Design Lab	1	0	4	3
6	R18EEE41L2	Technical Seminar	0	0	2	1
7	R18EEE41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	4	2
8	R18EEE41P2	Comprehensive Viva-voce	0	0	6	3
		<b>Total Credits</b>	<b>13</b>	<b>0</b>	<b>16</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective-III	3	0	0	3
<b>Professional Elective-V</b>						
2	R18EEE4251	Power Quality & FACTS	3	0	0	3
	R18EEE4252	Control System Design				
	R18CSE4265	AI Techniques in Electrical Engineering				
<b>Professional Elective-VI</b>						
3	R18EEE4261	Smart Grid Technologies	3	0	0	3
	R18EEE4262	Electrical Distribution Systems				
	R18EEE4263	Advanced Control of Electric Drives				
4	R18EEE42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R18CSE3272	Database Concepts				
3	R18ECE3273	Consumer Electronics				
4	R18EEE3274	Electrical Estimation & Costing				
5	R18INF3275	Information Technology Essentials				
6	R18MED3276	Introduction to Robotics				
7	R18HMS3277	Fundamentals of Entrepreneurship				
8	R18HMS3278	Day to Day Biology				

### Open Elective -II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4181	Green Building Engineering	3	0	0	3
2	R18CSE4182	Cyber Security Fundamentals				
3	R18ECE4183	Principles of Modern Communication Systems				
4	R18EEE4184	Illumination Engineering				
5	R18INF4185	E-Commerce				
6	R18MED4186	Industrial Design & Ergonomics				
7	R18HMS4187	Creative Writing				
8	R18HMS4188	Design Thinking				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4291	Remote Sensing Concepts	3	0	0	3
2	R18CSE4292	Fundamentals of Soft Computing				
3	R18ECE4293	Audio & Video Engineering				
4	R18EEE4294	Non Conventional Energy Resources				
5	R18INF4295	Information Security Fundamentals				
6	R18MED4296	Total Engineering Quality Management				
7	R18HMS4297	Human Values & Professional Ethics for Engineers				
8	R18HMS4298	Science Fiction				



**DEPARTMENT ECE**  
(BR18)

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**

(An Autonomous Institution under UGC, New Delhi)

**Choice Based Credit System (CBCS)**

**REGULATIONS – BR-18**

**B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING**

**I YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R18EAP1101	Applied Physics	3	1	0	4
3	R18CSE1101	Programming for Problem Solving	3	1	0	4
4	R18MED1102	Engineering Graphics	1	0	4	3
5	R18EAP12L1	Applied Physics Lab	0	0	3	1.5
6	R18CSE12L1	Programming for Problem Solving Lab	0	0	3	1.5
7	R18HAS1102	Environmental Science	3	0	0	0
8	R18IPG1101	Induction Programme for Three Weeks	0	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**I YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1201	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R18ECH1101	Chemistry	3	1	0	4
3	R18EEE1101	Basic Electrical Engineering	3	0	0	3
4	R18MED1101	Engineering Workshop	1	0	3	2.5
5	R18HAS1101	English	2	0	0	2
6	R18ECH12L1	Engineering Chemistry Lab	0	0	3	1.5
7	R18HAS12L1	English Language and Communication Skills Lab	0	0	2	1
8	R18EEE12L2	Basic Electrical Engineering Lab	0	0	2	1
9	R18COI1101	Constitution of India	3	0	0	0
10	R18ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>10</b>	<b>19</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**

(An Autonomous Institution under UGC, New Delhi)

**Choice Based Credit System (CBCS)**

**REGULATIONS – BR-18**

**B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING**

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18ECE2101	Electronic Devices and Circuits	3	1	0	4
2	R18EEE2107	Network Theory	3	0	0	3
3	R18ECE2102	Digital Logic Design	3	0	0	3
4	R18ECE2103	Signals and Systems	3	1	0	4
5	R18ECE2104	Probability Theory and Stochastic Processes	3	0	0	3
6	R18ECE21L1	Electronic Devices and Circuits Lab	0	0	3	1.5
7	R18ECE21L2	Digital Logic Design Lab	0	0	3	1.5
8	R18ECE21L3	Basic Simulation Lab	0	0	2	1
9	R18MAC2100	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>21</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH2201	Laplace Transforms, Numerical Methods & Complex Variables	3	1	0	4
2	R18ECE2201	Electromagnetic Theory And Transmission Lines	3	0	0	3
3	R18ECE2202	Analog and Digital Communications	3	1	0	4
4	R18ECE2203	Linear and Digital IC Applications	3	0	0	3
5	R18ECE2204	Electronic Circuit Analysis	3	0	0	3
6	R18ECE22L1	Analog and Digital Communications Lab	0	0	3	1.5
7	R18ECE22L2	IC Applications Lab	0	0	3	1.5
8	R18ECE22L3	Electronic Circuit Analysis Lab	0	0	2	1
9	R18MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**

(An Autonomous Institution under UGC, New Delhi)

**Choice Based Credit System (CBCS)**

**REGULATIONS – BR-18**

**B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING**

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MBA2201	Business Economics & Financial Analysis	3	0	0	3
2	R18ECE3101	Microprocessors & Microcontrollers	3	1	0	4
3	R18INF3103	Data Communications and Networks	3	1	0	4
4	R18EEE2202	Control Systems	3	1	0	4
<b>Professional Elective - I</b>						
5	R18CSE3114	Computer Organization & Operating Systems	3	0	0	3
	R18ECE3112	Coding Theory & Techniques				
	R18ECE3113	Electronic Measurements & Instrumentation				
6	R18ECE31L1	Microprocessors & Microcontrollers Lab	0	0	3	1.5
7	R18INF31L2	Data Communications and Networks Lab	0	0	3	1.5
8	R18HAS31L1	Advanced Communication Skills Lab	0	0	2	1
9	R18MAC3100	MOOCs-I	0	0	2	0
<b>Total Credits</b>			<b>15</b>	<b>3</b>	<b>10</b>	<b>22</b>

**III YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18ECE3201	Antennas and Wave Propagation	3	1	0	4
2	R18ECE3202	Digital Signal Processing	3	1	0	4
3	R18ECE3203	VLSI Design	3	1	0	4
<b>Professional Elective - II</b>						
4	R18ECE3221	Embedded System Design	3	0	0	3
	R18CSE4152	Internet of Things (IOT)				
	R18CSE3201	Machine Learning				
5		Open Elective - I	3	0	0	3
6	R18ECE32L1	Digital Signal Processing Lab	0	0	3	1.5
7	R18ECE32L2	e – CAD Lab	0	0	3	1.5
8	R18ECE32L3	Technical Term Paper	0	0	2	1
9	R18MAC3200	MOOCs-II	0	0	2	0
<b>Total Credits</b>			<b>15</b>	<b>3</b>	<b>10</b>	<b>22</b>

**SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY**

(An Autonomous Institution under UGC, New Delhi)

**Choice Based Credit System (CBCS)**

**REGULATIONS – BR-18**

**B. Tech. ELECTRONICS & COMMUNICATION ENGINEERING**

**IV YEAR I SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18ECE4101	Microwave and Optical Communication	3	0	0	3
2	R18HAS4101	Professional Practice, Law & Ethics	2	0	0	2
<b>Professional Elective – III</b>						
3	R18ECE4131	Digital Image Processing	3	0	0	3
	R18CSE4101	Cryptography and Network Security				
	R18CSE4142	Artificial Intelligence (AI)				
<b>Professional Elective – IV</b>						
4	R18ECE4141	Cellular & Mobile Communications	3	0	0	3
	R18ECE4142	Digital Signal Processors & Architectures				
	R18ECE4143	System on Chip Architecture				
5		Open Elective - II	3	0	0	3
6	R18ECE41L1	Microwave & Optical Communications Lab	0	0	2	1
7	R18ECE41L2	Technical Seminar	0	0	2	1
8	R18ECE41P1	Comprehensive Viva-voce	0	0	6	3
9	R18ECE41P2	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
		<b>Total Credits</b>	<b>14</b>	<b>0</b>	<b>10</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters.

**Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.**

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

S. No.	Course Code	Course Title	L	T	P	Credits
<b>Professional Elective – V</b>						
1	R18ECE4251	Satellite Communications	3	0	0	3
	R18ECE4252	Low Power VLSI				
	R18ECE4253	Wireless Sensor Networks				
<b>Professional Elective – VI</b>						
2	R18ECE4261	Wireless Communication & Networks	3	0	0	3
	R18ECE4262	Electronic Product Design & Packaging				
	R18ECE4263	Radar Systems				
3		Open Elective - III	3	0	0	3
4	R18ECE42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

\*MC – Satisfied/Unsatisfied

**LIST OF OPEN ELECTIVES**

**Open Elective – I**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R18CSE3272	Database Concepts				
3	R18ECE3273	Consumer Electronics				
4	R18EEE3274	Electrical Estimation & Costing				
5	R18INF3275	Information Technology Essentials				
6	R18MED3276	Introduction to Robotics				
7	R18HMS3277	Fundamentals of Entrepreneurship				
8	R18HMS3278	Day to Day Biology				

**Open Elective –II**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4181	Green Building Engineering	3	0	0	3
2	R18CSE4182	Cyber Security Fundamentals				
3	R18ECE4183	Principles of Modern Communication Systems				
4	R18EEE4184	Illumination Engineering				
5	R18INF4185	E-Commerce				
6	R18MED4186	Industrial Design & Ergonomics				
7	R18HMS4187	Creative Writing				
8	R18HMS4188	Design Thinking				

**Open Elective –III**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4291	Remote Sensing Concepts	3	0	0	3
2	R18CSE4292	Fundamentals of Soft Computing				
3	R18ECE4293	Audio & Video Engineering				
4	R18EEE4294	Non Conventional Energy Resources				
5	R18INF4295	Information Security Fundamentals				
6	R18MED4296	Total Engineering Quality Management				
7	R18HMS4297	Human Values & Professional Ethics for Engineers				
8	R18HMS4298	Science Fiction				

# COMPUTER SCIENCE & ENGINEERING

## SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC, New Delhi)

### Choice Based Credit System (CBCS)

REGULATIONS – R18

#### B. Tech. COMPUTER SCIENCE & ENGINEERING

Common to EEE, CSE & IT

#### I YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1101	Mathematics – I (Linear Algebra and Calculus)	3	1	0	4
2	R18ECH1101	Chemistry	3	1	0	4
3	R18EEE1130	Basic Electrical Engineering	3	0	0	3
4	R18MED1101	Engineering Workshop	1	0	3	2.5
5	R18HAS1101	English	2	0	0	2
6	R18ECH1201	Engineering Chemistry Lab	0	0	3	1.5
7	R18HAS1201	English Language and Communication Skills lab	0	0	2	1
8	R18EEE1212	Basic Electrical Engineering Lab	0	0	2	1
9	R18HAS1102	Environmental Science	3	0	0	0
10	R18IPG1101	Induction Programme for Three Weeks	0	0	0	0
<b>Total Credits</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>19</b>

#### I YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MTH1102	Mathematics – II (Advanced Calculus)	3	1	0	4
2	R18EAP1101	Applied Physics	3	1	0	4
3	R18CSE1101	Programming for Problem Solving	3	1	0	4
4	R18MED1102	Engineering Graphics	1	0	4	3
5	R18EAP1201	Applied Physics Lab	0	0	3	1.5
6	R18CSE1201	Programming for Problem Solving Lab	0	0	3	1.5
7	R18COI1101	Constitution of India	3	0	0	0
8	R18ITK1101	Essence of Indian Traditional Knowledge	3	0	0	0
<b>Total Credits</b>			<b>16</b>	<b>3</b>	<b>10</b>	<b>18</b>

# COMPUTER SCIENCE & ENGINEERING

## SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC, New Delhi)

### Choice Based Credit System (CBCS)

REGULATIONS – R18

#### B. Tech. COMPUTER SCIENCE & ENGINEERING

##### II YEAR I SEMESTER

##### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18ECE2105	Analog Electronics	3	0	0	3
2	R18CSE2101	Data Structures	3	1	0	4
3	R18MTH2102	Computer Oriented Statistical Methods	4	0	0	4
4	R18CSE2102	Computer Organization & Architecture	3	0	0	3
5	R18CSE2103	Object Oriented Programming using C++	2	0	0	2
6	R18ECE21L4	Analog Electronics Lab	0	0	2	1
7	R18CSE21L1	Data Structures Lab	0	0	3	1.5
8	R18CSE21L2	IT Workshop Lab	0	0	3	1.5
9	R18CSE21L3	C++ Programming Lab	0	0	2	1
10	R18MAC2100	Gender Sensitization Lab	0	0	2	0
		Total Credits	<b>15</b>	<b>1</b>	<b>12</b>	<b>21</b>

##### II YEAR II SEMESTER

##### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CSE2201	Discrete Mathematics	3	0	0	3
2	R18ECE2102	Digital Logic Design	3	0	0	3
3	R18CSE2202	Operating Systems	3	0	0	3
4	R18CSE2203	Database Management Systems	3	1	0	4
5	R18CSE2204	Java Programming	3	1	0	4
6	R18CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R18CSE22L2	Database Management Systems Lab	0	0	3	1.5
8	R18CSE22L3	Java Programming Lab	0	0	2	1
9	R18MAC2200	Intellectual Property Rights	3	0	0	0
		Total Credits	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>



# COMPUTER SCIENCE & ENGINEERING

## SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC, New Delhi)

### Choice Based Credit System (CBCS)

REGULATIONS – R18

#### B. Tech. COMPUTER SCIENCE & ENGINEERING

##### III YEAR I SEMESTER

##### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MBA2201	Business Economics & Financial Analysis	3	0	0	3
2	R18CSE3102	Software Engineering	3	0	0	3
3	R18CSE3103	Computer Networks	3	0	0	3
4	R18CSE3104	Web Technologies	3	0	0	3
5	<b>Professional Elective-I</b>		3	0	0	3
	R18CSE3111	Advanced Computer Architecture				
	R18CSE3112	Formal Languages & Automata Theory				
	R18CSE3113	Principles of Programming Languages				
6	<b>Professional Elective -II</b>		3	0	0	3
	R18CSE3121	Advanced Operating Systems				
	R18CSE3122	Artificial Intelligence				
	R18CSE3123	Distributed Databases				
7	R18CSE31L1	Software Engineering Lab	0	0	3	1.5
8	R18CSE31L2	Computer Networks & Web Technologies Lab	0	0	3	1.5
9	R18HAS31L1	Advanced Communication Skills Lab	0	0	2	1
10	R18MAC3100	MOOCs-I	0	0	2	0
		Total Credits	18	0	10	22

##### III YEAR II SEMESTER

##### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CSE3201	Machine Learning	3	1	0	4
2	R18CSE3202	Compiler Design	3	1	0	4
3	R18CSE3203	Design and Analysis of Algorithms	3	1	0	4
4	<b>Professional Elective –III</b>		3	0	0	3
	R18CSE3231	Software Testing Methodologies				
	R18CSE3232	Scripting Languages				
	R18CSE3233	Mobile Application Development				
5		<b>Open Elective-I</b>	3	0	0	3
6	R18CSE32L1	Machine Learning Lab	0	0	3	1.5
7	R18CSE32L2	Compiler Design Lab	0	0	3	1.5
8	R18CSE32L3	Professional Elective-III Lab	0	0	2	1
9	R18MAC3200	MOOCs-II	0	0	2	0
		Total Credits	15	3	10	22

\*MC - Environmental Science – Should be Registered by Lateral Entry Students Only.

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### Choice Based Credit System (CBCS)

REGULATIONS – R18

#### B. Tech. COMPUTER SCIENCE & ENGINEERING

#### IV YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CSE4101	Cryptography & Network Security	3	0	0	3
2	R18CSE4102	Data Mining	2	0	0	2
3	<b>Professional Elective -IV</b>		3	0	0	3
	R18CSE4141	Graph Theory				
	R18CSE4142	Informational Retrieval Systems				
	R18CSE4143	Cloud Computing				
4	<b>Professional Elective -V</b>		3	0	0	3
	R18CSE4151	Soft Computing				
	R18CSE4152	Internet of Things				
	R18CSE4153	Software Process & Project Management				
5		<b>Open Elective - II</b>	3	0	0	3
6	R18CSE41L1	Cryptography & Network Security Lab	0	0	2	1
7	R18CSE41L2	Technical Seminar	0	0	2	1
8	R18CSE41P1	Comprehensive Viva-voce	0	0	6	3
9	R18CSE41P2	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
		<b>Total Credits</b>	<b>14</b>	<b>0</b>	<b>10</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

#### IV YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18HAS4201	Organizational Behaviour	3	0	0	3
2	<b>Professional Elective -VI</b>		3	0	0	3
	R18CSE4261	Distributed Systems				
	R18CSE4262	Cyber Forensics				
	R18CSE4263	Human Computer Interaction				
3		<b>Open Elective-III</b>	3	0	0	3
4	R18CSE42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

\*MC – Satisfied/Unsatisfied

**LIST OF OPEN ELECTIVES**

**Open Elective – I**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV3271	Disaster Management & Mitigation	3	0	0	3
2	R18CSE3272	Database Concepts				
3	R18ECE3273	Consumer Electronics				
4	R18EEE3274	Electrical Estimation & Costing				
5	R18INF3275	Information Technology Essentials				
6	R18MED3276	Introduction to Robotics				
7	R18HMS3277	Fundamentals of Entrepreneurship				
8	R18HMS3278	Day to Day Biology				

**Open Elective –II**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4181	Green Building Engineering	3	0	0	3
2	R18CSE4182	Cyber Security Fundamentals				
3	R18ECE4183	Principles of Modern Communication Systems				
4	R18EEE4184	Illumination Engineering				
5	R18INF4185	E-Commerce				
6	R18MED4186	Industrial Design & Ergonomics				
7	R18HMS4187	Creative Writing				
8	R18HMS4188	Design Thinking				

**Open Elective –III**

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4291	Remote Sensing Concepts	3	0	0	3
2	R18CSE4292	Fundamentals of Soft Computing				
3	R18ECE4293	Audio & Video Engineering				
4	R18EEE4294	Non Conventional Energy Resources				
5	R18INF4295	Information Security Fundamentals				
6	R18MED4296	Total Engineering Quality Management				
7	R18HMS4297	Human Values & Professional Ethics for Engineers				
8	R18HMS4298	Science Fiction				

## SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

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### Choice Based Credit System (CBCS)

<b>REGULATIONS – R18</b>
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#### B.Tech. - Information Technology

#### II YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18ECE2105	Analog Electronics	3	0	0	3
2	R18CSE2101	Data Structures	3	1	0	4
3	R18MTH2102	Computer Oriented Statistical Methods	4	0	0	4
4	R18CSE2102	Computer Organization & Architecture	3	0	0	3
5	R18CSE2103	Object Oriented Programming using C++	2	0	0	2
6	R18ECE21L4	Analog Electronics Lab	0	0	2	1
7	R18CSE21L1	Data Structures Lab	0	0	3	1.5
8	R18CSE21L2	IT Workshop Lab	0	0	3	1.5
9	R18CSE21L3	C++ Programming Lab	0	0	2	1
10	R18MAC2100	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>1</b>	<b>12</b>	<b>21</b>

#### II YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CSE2201	Discrete Mathematics	3	0	0	3
2	R18ECE2102	Digital Logic Design	3	0	0	3
3	R18CSE2202	Operating Systems	3	0	0	3
4	R18CSE2203	Database Management Systems	3	1	0	4
5	R18CSE2204	Java Programming	3	1	0	4
6	R18CSE22L1	Operating Systems Lab	0	0	3	1.5
7	R18CSE22L2	Database Management Systems Lab	0	0	3	1.5
8	R18CSE22L3	Java Programming Lab	0	0	2	1
9	R18MAC2200	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>

## SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

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### Choice Based Credit System (CBCS)

**REGULATIONS – R18**

#### B.Tech. - Information Technology

#### III YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18MBA2201	Business Economics & Financial Analysis	3	0	0	3
2	R18CSE3102	Software Engineering	3	0	0	3
3	R18INF3101	Data Communication & Computer Networks	3	1	0	3
4	R18INF3102	Web Programming	3	0	0	3
5	<b>Professional Elective-I</b>		3	0	0	3
	R18CSE3111	Advanced Computer Architecture				
	R18CSE3101	Formal Languages & Automata Theory				
	R18CSE3113	Principles of Programming Languages				
6	<b>Professional Elective –II</b>		3	0	0	3
	R18CSE3121	Advanced Operating Systems				
	R18CSE3122	Artificial Intelligence				
	R18INF3122	Computer Graphics				
7	R18CSE31L1	Software Engineering Lab	0	0	3	1.5
8	R18INF31L1	Computer Networks & Web Programming Lab	0	0	3	1.5
9	R18HAS31L1	Advanced Communication Skills Lab	0	0	2	1
10	R18MAC3100	MOOCs-I	0	0	2	0
<b>Total Credits</b>			<b>17</b>	<b>1</b>	<b>10</b>	<b>22</b>

#### III YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CSE3201	Machine Learning	3	1	0	4
2	R18INF3201	Principles of Compiler Construction	3	1	0	4
3	R18INF3202	Algorithm Design and Analysis	3	1	0	4
5	<b>Professional Elective –III</b>		3	0	0	3
	R18CSE3231	Software Testing Methodologies				
	R18CSE3232	Scripting Languages				
	R18CSE3233	Mobile Application Development				
6		Open Elective-I	3	0	0	3
7	R18CSE32L1	Machine Learning Lab	0	0	3	1.5
8	R18INF32L1	Compiler Construction Lab	0	0	3	1.5
9	R18CSE32L3	Professional Elective-III Lab	0	0	2	1
10	R18MAC3200	MOOCs-II	0	0	2	0
<b>Total Credits</b>			<b>17</b>	<b>1</b>	<b>10</b>	<b>22</b>

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### Choice Based Credit System (CBCS)

#### REGULATIONS – R18

#### B.Tech. - Information Technology

#### IV YEAR I SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18INF4101	Information Security	3	0	0	3
2	R18CSE4102	Data Mining	2	0	0	2
3	<b>Professional Elective –IV</b>		3	0	0	3
	R18INF4142	Pattern Recognition				
	R18CSE4143	Cloud Computing				
	R18INF4141	Ad hoc Sensor Networks				
4	<b>Professional Elective –V</b>		3	0	0	3
	R18CSE4152	Internet of Things				
	R18CSE3123	Distributed Databases				
	R18CSE4153	Software Process & Project Management				
5		Open Elective-II	3	0	0	3
6	R18INF41L1	Information Security Lab	0	0	2	1
7	R18INF41L2	Technical Seminar	0	0	2	1
8	R18INF41P1	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
9	R18INF41P2	Comprehensive Viva-voce	0	0	6	3
		<b>Total Credits</b>	<b>14</b>	<b>0</b>	<b>10</b>	<b>21</b>

\* To be carried out during the summer vacation between 6<sup>th</sup> and 7<sup>th</sup> semesters

Note: Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

#### IV YEAR II SEMESTER

#### COURSE STRUCTURE

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18HAS4201	Organizational Behaviour	3	0	0	3
2	<b>Professional Elective –VI</b>		3	0	0	3
	R18CSE4261	Distributed Systems				
	R18CSE4262	Cyber Forensics				
	R18CSE4263	Human Computer Interaction				
3		Open Elective-III	3	0	0	3
4	R18INF42P1	Project Work	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

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## LIST OF OPEN ELECTIVES

### Open Elective – I

S. No.	Course Code	Course Title	L	T	P	Credits
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2	R18CSE3272	Database Concepts				
3	R18ECE3273	Consumer Electronics				
4	R18EEE3274	Electrical Estimation & Costing				
5	R18INF3275	Information Technology Essentials				
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8	R18HMS3278	Day to Day Biology				

### Open Elective –II

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4181	Green Building Engineering	3	0	0	3
2	R18CSE4182	Cyber Security Fundamentals				
3	R18ECE4183	Principles of Modern Communication Systems				
4	R18EEE4184	Illumination Engineering				
5	R18INF4185	E-Commerce				
6	R18MED4186	Industrial Design & Ergonomics				
7	R18HMS4187	Creative Writing				
8	R18HMS4188	Design Thinking				

### Open Elective –III

S. No.	Course Code	Course Title	L	T	P	Credits
1	R18CIV4291	Remote Sensing Concepts	3	0	0	3
2	R18CSE4292	Fundamentals of Soft Computing				
3	R18ECE4293	Audio & Video Engineering				
4	R18EEE4294	Non Conventional Energy Resources				
5	R18INF4295	Information Security Fundamentals				
6	R18MED4296	Total Engineering Quality Management				
7	R18HMS4297	Human Values & Professional Ethics for Engineers				
8	R18HMS4298	Science Fiction				



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