

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**MASTER OF BUSINESS ADMINISTRATION MBA (Regular) R-19**  
**Effective from Academic Year 2019 - 20 Admitted Batch**

**COURSE STRUCTURE AND SYLLABUS**

**I Year I Semester**

Course Code	Course Title	L	T	P	Credits
19MBA01	Management and Organizational Behaviour	3	1	0	4
19MBA02	Business Economics	3	1	0	4
19MBA03	Financial Accounting & Analysis	3	1	0	4
19MBA04	Research Methodology and Statistical Analysis	3	1	0	4
19MBA05	Legal and Business Environment	3	1	0	4
Open Elective-I 19MBA06	6A Business Ethics and Corporate Governance 6B Project Management 6C Technology Management 6D Cross Cultural Management	3	0	0	3
19MBA07	Business Communication Lab.	0	0	2	2
19MBA08	Statistical Data Analysis Lab	0	0	2	2
	<b>TOTAL</b>	<b>18</b>	<b>5</b>	<b>4</b>	<b>27</b>

**I Year II Semester**

Course Code	Course Title	L	T	P	Credits
19MBA09	Human Resource Management	3	1	0	4
19MBA10	Marketing Management	3	1	0	4
19MBA11	Financial Management	3	1	0	4
19MBA12	Quantitative Analysis for Business Decisions	3	1	0	4
19MBA13	Entrepreneurship	3	1	0	4
19MBA14	Logistics & Supply Chain Management	3	1	0	4
Open Elective-II 19MBA15	15A Total Quality Management 15B Marketing Research 15C International Business 15D Rural Marketing	3	0	0	3
	<b>TOTAL</b>	<b>21</b>	<b>6</b>	<b>0</b>	<b>27</b>

**Internship during Summer vacation (after Semester –II)**

**II Year I Semester**

Course Code	Course Title	L	T	P	Credits
19MBA16	Production & Operations Management	3	1	0	4
19MBA17	Management Information Systems	3	1	0	4
19MBA18	Data Analytics	3	1	0	4
19MBA19 M1/H1/F1/E1	(MRKG/HRM/FIN/ENTP)	3	1	0	4
19MBA20 M2/H2/F2/E2	(MRKG/HRM/FIN/ENTP)	3	1	0	4
19MBA21 M3/H3/3I/E3	(MRKG/HRM/FIN/ENTP)	3	1	0	4

19MBA22	Summer Internship	0	0	0	2
	<b>TOTAL</b>	<b>18</b>	<b>6</b>	<b>3</b>	<b>26</b>

**II Year II Semester**

Course Code	Course Title	L	T	P	Credits
19MBA 23	Strategic Management	3	1	0	4
19MBA 24 M4/H4/F4/E4	(MRKG/HRM/FIN/ENTP)	3	1	0	4
19MBA25 M5/H5/F5/E5	(MRKG/HRM/FIN/ENTP)	3	1	0	4
19MBA26 M6/H6/F6/E6	(MRKG/HRM/FIN/ENTP)	3	1	0	4
19MBA27	Pre-submission project Seminar	0	0	2	2
19MBA28	Main Project Viva-Voce	0	2	4	4
	<b>TOTAL</b>	<b>12</b>	<b>6</b>	<b>6</b>	<b>22</b>

**LIST OF ELECTIVE SUBJECTS**

Students have to select any One Specialization (Marketing, Finance, Human Resources, and Entrepreneurship) and he/she needs to select the Core Elective subjects listed under the chosen specialization only.

Course Code	Specialization	Credits
	<b>MARKETING</b>	
19MBA19M1	Digital Marketing	4
19MBA20 M2	Advertising and Sales Management	4
19MBA21 M3	Consumer Behaviour	4
19MBA24 M4	Customer Relationship Management	4
19MBA25 M5	International Marketing	4
19MBA26 M6	Services Marketing	4
	<b>FINANCE</b>	
19MBA19F1	Security Analysis and Portfolio Management	4
19MBA20 F2	Financial Institutions, Markets & Services	4
19MBA21 F3	Strategic Management Accounting	4
19MBA24 F4	International Financial Management	4
19MBA25 F5	Strategic Investment and Financing Decisions	4
19MBA26F6	Risk Management and Financial Derivatives	4
	<b>HUMAN RESOURCES</b>	
19MBA19H1	Performance Management Systems	4
19MBA20 H2	Learning and Development	4
19MBA21 H3	Management of Industrial Relations	4
19MBA24 H4	International Human Resource Management	4
19MBA25H5	Leadership and Change Management	4
19MBA26 H6	Talent and Knowledge Management	4
	<b>ENTREPRENEURSHIP</b>	
19MBA19E1	Startup Management	4
19MBA20 E2	MSME Management	4
19MBA21 E3	Family Business Management	4
19MBA24E4	Entrepreneurial Finance	4
19MBA25 E5	Entrepreneurial Marketing	4
19MBA26 E6	Creativity Innovation and Entrepreneurship	4

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech. in ELECTRONICS AND COMMUNICATION ENGINEERING**  
**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**I YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics - I	3	1	0	4
2	AP102BS	Applied Physics	3	1	0	4
3	CS103ES	Programming for Problem Solving	3	1	0	4
4	ME104ES	Engineering Graphics	1	0	4	3
5	AP105BS	Applied Physics Lab	0	0	3	1.5
6	CS106ES	Programming for Problem Solving Lab	0	0	3	1.5
7	*MC109ES	Environmental Science	3	0	0	0
		Induction Programme				
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**I YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA201BS	Mathematics - II	3	1	0	4
2	CH202BS	Chemistry	3	1	0	4
3	EE203ES	Basic Electrical Engineering	3	0	0	3
4	ME205ES	Engineering Workshop	1	0	3	2.5
5	EN205HS	English	2	0	0	2
6	CH206BS	Engineering Chemistry Lab	0	0	3	1.5
7	EN207HS	English Language and Communication Skills Lab	0	0	2	1
8	EE208ES	Basic Electrical Engineering Lab	0	0	2	1
		<b>Total Credits</b>	<b>12</b>	<b>2</b>	<b>10</b>	<b>19</b>

**II YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC301PC	Electronic Devices and Circuits	3	1	0	4
2	EC302PC	Network Analysis and Transmission Lines	3	0	0	3
3	EC303PC	Digital System Design	3	1	0	4
4	EC304PC	Signals and Systems	3	1	0	4
5	EC305ES	Probability Theory and Stochastic Processes	3	0	0	3
6	EC306PC	Electronic Devices and Circuits Lab	0	0	2	1
7	EC307PC	Digital System Design Lab	0	0	2	1
8	EC308ES	Basic Simulation Lab	0	0	2	1
9	*MC309	Constitution of India	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>6</b>	<b>21</b>

**II YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA401BS	Laplace Transforms, Numerical Methods & Complex Variables	3	1	0	4
2	EC402PC	Electromagnetic Fields and Waves	3	0	0	3

3	EC403PC	Analog and Digital Communications	3	1	0	4
4	EC404PC	Linear IC Applications	3	0	0	3
5	EC405PC	Electronic Circuit Analysis	3	0	0	3
6	EC406PC	Analog and Digital Communications Lab	0	0	3	1.5
7	EC407PC	IC Applications Lab	0	0	3	1.5
8	EC408PC	Electronic Circuit Analysis Lab	0	0	2	1
9	*MC409	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>21</b>

**III YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC501PC	Microprocessors & Microcontrollers	3	1	0	4
2	EC502PC	Data Communications and Networks	3	1	0	4
3	EC503PC	Control Systems	3	1	0	4
4	SM504MS	Business Economics & Financial Analysis	3	0	0	3
5		Professional Elective - I	3	0	0	3
6	EC505PC	Microprocessors & Microcontrollers Lab	0	0	3	1.5
7	EC506PC	Data Communications and Networks Lab	0	0	3	1.5
8	EN508HS	Advanced Communication Skills Lab	0	0	2	1
9	*MC510	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>22</b>

**III YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC601PC	Antennas and Propagation	3	1	0	4
2	EC602PC	Digital Signal Processing	3	1	0	4
3	EC603PC	VLSI Design	3	1	0	4
4		Professional Elective - II	3	0	0	3
5		Open Elective - I	3	0	0	3
6	EC604PC	Digital Signal Processing Lab	0	0	3	1.5
7	EC605PC	e – CAD Lab	0	0	3	1.5
8	EC606PC	Scripting Languages Lab	0	0	2	1
9	*MC609	Environmental Science	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>22</b>

**IV YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC701PC	Microwave and Optical Communications	3	0	0	3
2		Professional Elective – III	3	0	0	3
3		Professional Elective – IV	3	0	0	3
4		Open Elective - II	3	0	0	3
5	SM702MS	Professional Practice, Law & Ethics	2	0	0	2
6	EC703PC	Microwave and Optical Communications Lab	0	0	2	1
7	EC704PC	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
8	EC705PC	Seminar	0	0	2	1
9	EC706PC	Project Stage - I	0	0	6	3
		<b>Total Credits</b>	<b>14</b>	<b>0</b>	<b>10</b>	<b>21</b>

**IV YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1		Professional Elective – V	3	0	0	3
2		Professional Elective – VI	3	0	0	3
3		Open Elective - III	3	0	0	3
4	EC801PC	Project Stage - II	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

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

\*MC – Satisfactory/Unsatisfactory

**Note:** Industrial Oriented Mini Project/ Summer Internship is to be carried out during the summer vacation between 6th and 7th semesters. Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

**Professional Elective – I**

EC511PE	Computer Organization & Operating Systems
EC512PE	Error Correcting Codes
EC513PE	Electronic Measurements and Instrumentation

**Professional Elective – II**

EC611PE	Object Oriented Programming through Java
EC612PE	Mobile Communications and Networks
EC613PE	Embedded System Design

**Professional Elective – III**

EC711PE	Artificial Neural Networks
EC712PE	Scripting Languages
EC713PE	Digital Image Processing

**Professional Elective – IV**

EC721PE	Biomedical Instrumentation
EC722PE	Database Management Systems
EC723PE	Network Security and Cryptography

**Professional Elective – V**

EC811PE	Satellite Communications
EC812PE	Radar Systems
EC813PE	Wireless Sensor Networks

**Professional Elective – VI**

EC821PE	System on Chip Architecture
EC822PE	Test and Testability
EC823PE	Low Power VLSI Design

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Medchal Dist-501 301

2	CE402ES	Basic Mechanical Engineering for Civil Engineers	2	0	0	2
3	CE403PC	Building Materials, Construction and Planning	3	0	0	3
4	CE404PC	Strength of Materials - II	3	0	0	3
5	CE405PC	Hydraulics and Hydraulic Machinery	3	0	0	3
6	CE406PC	Structural Analysis - I	3	0	0	3
7	CE407PC	Computer aided Civil Engineering Drawing	0	0	3	1.5
8	CE409PC	Hydraulics and Hydraulic Machinery Lab	0	0	3	1.5
9	EE409ES	Basic Electrical and Electronics Engineering Lab	0	0	2	1
10	*MC409	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>17</b>	<b>0</b>	<b>10</b>	<b>21</b>

## III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
4	CE501	Structural Analysis-II	3	0	0	3
2	CE502PC	Geotechnical Engineering	3	0	0	3
3	CE503PC	Structural Engineering -I (RCC)	3	1	0	4
4	CE504PC	Transportation Engineering	3	0	0	3
5		Professional Elective-I	3	0	0	3
6	SM505MS	Engineering Economics and Accountancy	2	0	0	2
7	CE506PC	Highway Engineering and Concrete Technology Lab	0	0	3	1.5
8	CE507PC	Geotechnical Engineering Lab	0	0	3	1.5
9	EN508HS	Advanced Communication Skills Lab	0	0	2	1
10	*MC509	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>20</b>	<b>1</b>	<b>8</b>	<b>22</b>

## III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CE601PC	Hydrology & Water Resources Engineering	3	1	0	4
1	CE602PC	Environmental Engineering	3	0	0	3
2	CE603PC	Foundation Engineering	3	0	0	3
3	CE604PC	Structural Engineering -II (Steel)	3	1	0	4
5		Professional Elective -II	3	0	0	3
6		Open Elective -I	3	0	0	3
7	CE605PC	Environmental Engineering Lab	0	0	2	1
8	CE606PC	Computer Aided Design Lab	0	0	2	1
9	*MC609	Environmental Science	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>2</b>	<b>4</b>	<b>22</b>

## IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CE701PC	Estimation, Costing and Project Management	3	1	0	4
2		Professional Elective -III	3	0	0	3
3		Professional Elective -IV	3	0	0	3
4		Open Elective -II	3	0	0	3
5	SM702MS	Professional Practice law & Ethics	2	0	0	2

6	CE703PC	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
7	CE704PC	Seminar	0	0	2	1
8	CE705PC	Project Stage - I	0	0	6	3
		<b>Total Credits</b>	<b>14</b>	<b>1</b>	<b>12</b>	<b>21</b>

## IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Professional Elective -V	3	0	0	3
2		Professional Elective -VI	3	0	0	3
3		Open Elective -III	3	0	0	3
4	CE801PC	Project Stage-II	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

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

**Note:** Industrial Oriented Mini Project/ Summer Internship is to be carried out during the summer vacation between 6th and 7th semesters. Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

## Professional Elective – I

CE511PE	Concrete Technology
CE512PE	Theory of Elasticity
CE513PE	Rock Mechanics

## Professional Elective – II

CE611PE	Prestressed Concrete
CE612PE	Elements of Earth Quake Engineering
CE613PE	Advanced Structural Analysis

## Professional Elective-III

CE711PE	Remote Sensing & GIS
CE712PE	Ground Improvement Techniques
CE713PE	Advanced Structural Design

## Professional Elective -IV

CE721PE	Irrigation and Hydraulic Structures
CE722PE	Pipeline Engineering
CE723PE	Ground Water Hydrology

## Professional Elective –V

CE811PE	Solid Waste Management
CE812PE	Environmental Impact Assessment
CE813PE	Air pollution

## Professional Elective -VI

CE821PE	Airports, Railways and Waterways
CE822PE	Urban Transportation Planning
CE823PE	Finite Element Methods for Civil Engineering

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech. in CIVIL ENGINEERING**  
**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**I YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics - I				
2	PH102BS	Engineering Physics	3	1	0	4
3	CS103ES	Programming for Problem Solving	3	1	0	4
4	ME104ES	Engineering Graphics	3	1	0	4
5	PH105BS	Engineering Physics Lab	1	0	4	3
6	CS106ES	Programming for Problem Solving Lab	0	0	3	1.5
7	*MC109ES	Environmental Science	0	0	3	1.5
		Induction Programme	3	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**I YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA201BS	Mathematics - II				
2	CH202BS	Chemistry	3	1	0	4
3	ME203ES	Engineering Mechanics	3	1	0	4
4	ME205ES	Engineering Workshop	3	1	0	4
5	EN205HS	English	1	0	3	2.5
6	CH206BS	Engineering Chemistry Lab	2	0	0	2
7	EN207HS	English Language and Communication Skills Lab	0	0	3	1.5
		<b>Total Credits</b>	<b>12</b>	<b>3</b>	<b>8</b>	<b>19.0</b>

**II YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	CE301PC	Surveying and Geomatics				
2	CE302PC	Engineering Geology	3	0	0	3
3	CE303PC	Strength of Materials - I	2	0	0	2
4	MA304BS	Probability and Statistics	3	1	0	4
5	CE305PC	Fluid Mechanics	3	1	0	4
6	CE306PC	Surveying Lab	3	1	0	4
7	CE307PC	Strength of Materials Lab	0	0	3	1.5
8	CE308PC	Engineering Geology Lab	0	0	3	1.5
9	*MC309	Constitution of India	0	0	2	1
		<b>Total Credits</b>	<b>17</b>	<b>3</b>	<b>8</b>	<b>21</b>

**II YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	EE401ES	Basic Electrical and Electronics Engineering	3	0	0	3



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**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**I YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics - I	3	1	0	4
2	CH102BS	Chemistry	3	1	0	4
3	EE103ES	Basic Electrical Engineering	3	0	0	3
4	ME105ES	Engineering Workshop	1	0	3	2.5
5	EN105HS	English	2	0	0	2
6	CH106BS	Engineering Chemistry Lab	0	0	3	1.5
7	EN107HS	English Language and Communication Skills Lab	0	0	2	1
8	EE108ES	Basic Electrical Engineering Lab	0	0	2	1
		Induction Programme				
		<b>Total Credits</b>	<b>12</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA201BS	Mathematics - II	3	1	0	4
2	AP202BS	Applied Physics	3	1	0	4
3	CS203ES	Programming for Problem Solving	3	1	0	4
4	ME204ES	Engineering Graphics	1	0	4	3
5	AP205BS	Applied Physics Lab	0	0	3	1.5
6	CS206ES	Programming for Problem Solving Lab	0	0	3	1.5
7	*MC209ES	Environmental Science	3	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**II YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	EE301ES	Engineering Mechanics	3	1	0	4
2	EE302PC	Electrical Circuit Analysis	3	1	0	4
3	EE303PC	Analog Electronics	3	0	0	3
4	EE304PC	Electrical Machines - I	3	1	0	4
5	EE305PC	Electromagnetic Fields	3	0	0	3
6	EE306PC	Electrical Machines Lab - I	0	0	2	1
7	EE307PC	Analog Electronics Lab	0	0	2	1
8	EE308PC	Electrical Circuits Lab	0	0	2	1
9	*MC309	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**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA401BS	Laplace Transforms, Numerical Methods & Complex variables	3	1	0	4

2	EE402PC	Electrical Machines – II	3	1	0	4
3	EE403PC	Digital Electronics	3	0	0	3
4	EE404PC	Control Systems	3	1	0	4
5	EE405PC	Power System - I	3	0	0	3
6	EE406PC	Digital Electronics Lab	0	0	2	1
7	EE407PC	Electrical Machines Lab - II	0	0	2	1
8	EE408PC	Control Systems Lab	0	0	2	1
9	*MC409	Constitution of India	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>6</b>	<b>21</b>

## III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EE501PE	Power Electronics	3	1	0	4
2	EE502PE	Power System-II	3	1	0	4
3	EE503PE	Measurements and Instrumentation	3	1	0	4
4		Professional Elective-I	3	0	0	3
5	SM504MS	Business Economics and Financial Analysis	3	0	0	3
6	EE505PC	Power System Simulation Lab	0	0	2	1
7	EE506PC	Power Electronics Lab	0	0	2	1
8	EE507PC	Measurements and Instrumentation Lab	0	0	2	1
9	EN508HS	Advanced Communication Skills Lab	0	0	2	1
10	*MC510	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>22</b>

## III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1		Open Elective-I	3	0	0	3
2		Professional Elective-II	3	0	0	3
3	EE601PC	Signals and Systems	2	1	0	3
4	EE602PC	Microprocessors & Microcontrollers	3	0	0	3
5	EE603PC	Power System Protection	3	1	0	4
6	EE604PC	Power System Operation and Control	3	0	0	3
7	EE605PC	Power System Lab	0	0	2	1
8	EE606PC	Microprocessors & Microcontrollers Lab	0	0	2	1
9	EE607PC	Signals and Systems Lab	0	0	2	1
10	*MC609	Environmental Science	3	0	0	0
		<b>Total Credits</b>	<b>20</b>	<b>2</b>	<b>6</b>	<b>22</b>

## IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective-II	3	0	0	3
2		Professional Elective-III	3	0	0	3
3		Professional Elective-IV	3	0	0	3
4	SM701MS	Fundamentals of Management for Engineers	3	0	0	3
5	EE701PC	Electrical & Electronics Design Lab	1	0	4	3
6	EE702PC	Industrial Oriented Mini Project/ Summer Internship	0	0	4	2*
7	EE703PC	Seminar	0	0	2	1

SLIC

http://www.jntu.ac.in/tech

	EE704PC	Project Stage - I	0	0	6	3
		<b>Total Credits</b>	<b>13</b>	<b>0</b>	<b>16</b>	<b>21</b>

**IV YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective-III	3	0	0	3
2		Professional Elective-V	3	0	0	3
3		Professional Elective-VI	3	0	0	3
4	EE801PC	Project Stage - II	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

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

\*MC – Satisfactory/Unsatisfactory

**NOTE:** Industrial Oriented Mini Project/ Summer Internship is to be carried out during the summer vacation between 6th and 7th semesters. Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

**Professional Elective - I**

EE511PE	Computer Architecture
EE512PE	High Voltage Engineering
EE513PE	Electrical Machine Design

**Professional Elective - II**

EE611PE	Optimization Techniques
EE612PE	Power Semiconductor Drives
EE613PE	Wind and Solar Energy systems

**Professional Elective - III**

EE711PE	Digital Control systems
EE712PE	Digital Signal Processing
EE713PE	Electrical and Hybrid Vehicles

**Professional Elective - IV**


EE721PE	HVDC Transmission
EE722PE	Power System Reliability
EE723PE	Industrial Electrical Systems

**Professional Elective - V**

EE811PE	Power Quality & FACTS
EE812PE	Control Systems Design
EE813PE	AI Techniques in Electrical Engineering

**Professional Elective - VI**

EE821PE	Smart Grid Technologies
EE822PE	Electrical Distribution Systems
EE823PE	Advanced Control of Electric Drives

  
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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech. in COMPUTER SCIENCE AND ENGINEERING**  
**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**I YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics - I	3	1	0	4
2	CH102BS	Chemistry	3	1	0	4
3	EE103ES	Basic Electrical Engineering	3	0	0	3
4	ME105ES	Engineering Workshop	1	0	3	2.5
5	EN105HS	English	2	0	0	2
6	CH106BS	Engineering Chemistry Lab	0	0	3	1.5
7	EN107HS	English Language and Communication Skills Lab	0	0	2	1
8	EE108ES	Basic Electrical Engineering Lab	0	0	2	1
		Induction Programme				
		<b>Total Credits</b>	<b>12</b>	<b>2</b>	<b>10</b>	<b>19</b>

**I YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA201BS	Mathematics - II	3	1	0	4
2	AP202BS	Applied Physics	3	1	0	4
3	CS203ES	Programming for Problem Solving	3	1	0	4
4	ME204ES	Engineering Graphics	1	0	4	3
5	AP205BS	Applied Physics Lab	0	0	3	1.5
6	CS206ES	Programming for Problem Solving Lab	0	0	3	1.5
7	*MC209ES	Environmental Science	3	0	0	0
		<b>Total Credits</b>	<b>13</b>	<b>3</b>	<b>10</b>	<b>18</b>

**II YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS301ES	Analog and Digital Electronics	3	0	0	3
2	CS302PC	Data Structures	3	1	0	4
3	MA303BS	Computer Oriented Statistical Methods	3	1	0	4
4	CS304PC	Computer Organization and Architecture	3	0	0	3
5	CS305PC	Object Oriented Programming using C++	2	0	0	2
6	CS306ES	Analog and Digital Electronics Lab	0	0	2	1
7	CS307PC	Data Structures Lab	0	0	3	1.5
8	CS308PC	IT Workshop Lab	0	0	3	1.5
9	CS309PC	C++ Programming Lab	0	0	2	1
10	*MC309	Gender Sensitization Lab	0	0	2	0
		<b>Total Credits</b>	<b>14</b>	<b>2</b>	<b>12</b>	<b>21</b>

## II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS401PC	Discrete Mathematics	3	0	0	3
2	SM402MS	Business Economics & Financial Analysis	3	0	0	3
3	CS403PC	Operating Systems	3	0	0	3
4	CS404PC	Database Management Systems	3	1	0	4
5	CS405PC	Java Programming	3	1	0	4
6	CS406PC	Operating Systems Lab	0	0	3	1.5
7	CS407PC	Database Management Systems Lab	0	0	3	1.5
8	CS408PC	Java Programming Lab	0	0	2	1
9	*MC409	Constitution of India	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>21</b>

## III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS501PC	Formal Languages & Automata Theory	3	0	0	3
2	CS502PC	Software Engineering	3	0	0	3
3	CS503PC	Computer Networks	3	0	0	3
4	CS504PC	Web Technologies	3	0	0	3
5		Professional Elective-I	3	0	0	3
6		Professional Elective -II	3	0	0	3
7	CS505PC	Software Engineering Lab	0	0	3	1.5
8	CS506PC	Computer Networks & Web Technologies Lab	0	0	3	1.5
9	EN508HS	Advanced Communication Skills Lab	0	0	2	1
10	*MC510	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>0</b>	<b>8</b>	<b>22</b>

## III YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS601PC	Machine Learning	3	1	0	4
2	CS602PC	Compiler Design	3	1	0	4
3	CS603PC	Design and Analysis of Algorithms	3	1	0	4
4		Professional Elective – III	3	0	0	3
5		Open Elective-I	3	0	0	3
6	CS604PC	Machine Learning Lab	0	0	3	1.5
7	CS605PC	Compiler Design Lab	0	0	3	1.5
8		Professional Elective-III Lab	0	0	2	1
9	*MC609	Environmental Science	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>22</b>

## IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS701PC	Cryptography & Network Security	3	0	0	3
2	CS702PC	Data Mining	2	0	0	2

3		Professional Elective -IV	3	0	0	3
4		Professional Elective -V	3	0	0	3
5		Open Elective - II	3	0	0	3
6	CS703PC	Cryptography & Network Security Lab	0	0	2	1
7	CS704PC	Industrial Oriented Mini Project/ Summer Internship	0	0	0	2*
8	CS705PC	Seminar	0	0	2	1
9	CS706PC	Project Stage - I	0	0	6	3
		<b>Total Credits</b>	<b>14</b>	<b>0</b>	<b>10</b>	<b>21</b>

## IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	SM801MS	Organizational Behaviour	3	0	0	3
2		Professional Elective - VI	3	0	0	3
3		Open Elective - III	3	0	0	3
4	CS802PC	Project Stage - II	0	0	14	7
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>

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

\*MC – Satisfactory/Unsatisfactory

**Note:** Industrial Oriented Mini Project/ Summer Internship is to be carried out during the summer vacation between 6th and 7th semesters. Students should submit report of Industrial Oriented Mini Project/ Summer Internship for evaluation.

## Professional Elective - I

CS511PE	Information Theory & Coding
CS512PE	Advanced Computer Architecture
CS513PE	Data Analytics
CS514PE	Image Processing
CS515PE	Principles of Programming Languages

## Professional Elective - II

CS521PE	Computer Graphics
CS522PE	Advanced Operating Systems
CS523PE	Informational Retrieval Systems
CS524PE	Distributed Databases
CS525PE	Natural Language Processing

## Professional Elective - III

CS611PE	Concurrent Programming
CS612PE	Network Programming
CS613PE	Scripting Languages
CS614PE	Mobile Application Development
CS615PE	Software Testing Methodologies

# Courses in PE - III and PE - III Lab must be in 1-1 correspondence.

## Professional Elective - IV

CS711PE	Graph Theory
CS712PE	Introduction to Embedded Systems


CS713PE	Artificial Intelligence
CS714PE	Cloud Computing
CS715PE	Ad-hoc & Sensor Networks

**Professional Elective - V**

CS721PE	Advanced Algorithms
CS722PE	Real Time Systems
CS723PE	Soft Computing
CS724PE	Internet of Things
CS725PE	Software Process & Project Management

**Professional Elective – VI**

CS811PE	Computational Complexity
CS812PE	Distributed Systems
CS813PE	Neural Networks & Deep Learning
CS814PE	Human Computer Interaction
CS815PE	Cyber Forensics

  
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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**MASTER OF BUSINESS ADMINISTRATION (MBA) R17**  
 Effective from Academic Year 2017 - 18 admitted batch

**COURSE STRUCTURE AND SYLLABUS**

**I Semester**

Course Code	Course Title	Int. marks	Ext. marks	L	T	P	C
17MBA01	Management and Organisational Behaviour	25	75	3	1	0	4
17MBA02	Business Economics	25	75	3	1	0	4
17MBA03	Financial Accounting & Analysis	25	75	3	1	0	4
17MBA04	Business Statistics	25	75	3	1	0	4
17MBA05	Business Law and Ethics	25	75	3	1	0	4
OPEN ELECTIVE-I 17MBA06	6A Business Research Methodology 6B Project Management 6C Technology Management 6D Rural Marketing	25	75	3	0	0	3
17MBA07	Business Communication - Lab	100	-	0	0	3	2
<b>TOTAL</b>		<b>250</b>	<b>450</b>	<b>18</b>	<b>5</b>	<b>3</b>	<b>25</b>

**II Semester**

Course Code	Course Title	Intl marks	Ext marks	L	T	P	C
17MBA08	Human Resource Management	25	75	3	1	0	4
17MBA09	Marketing Management	25	75	3	1	0	4
17MBA10	Financial Management	25	75	3	1	0	4
17MBA11	Quantitative Analysis for Business Decisions	25	75	3	1	0	4
17MBA12	Entrepreneurship	25	75	3	1	0	4
OPEN ELECTIVE-II 17MBA13	13A Total Quality Management 13B Corporate Governance 13C International Business 13D Supply Chain Management	25	75	3	0	0	3
17MBA14	Summer Internship	100	-	0	0	3	2
<b>TOTAL</b>		<b>250</b>	<b>450</b>	<b>18</b>	<b>5</b>	<b>3</b>	<b>25</b>

**III Semester**

Course Code	Course Title	Intl marks	Ext marks	L	T	P	C
17MBA15	Production & Operations Management	25	75	3	1	0	4
17MBA16	Management Information Systems	25	75	3	1	0	4
17MBA17	Data Analytics	25	75	3	1	0	4



17MBA18 M1/H1/F1/E1	(MRKG/HRM/FIN/ Entrepreneurship)	25	75	3	0	0	3
17MBA19 M2/H2/F2/E2	(MRKG/HRM/FIN/ Entrepreneurship )	25	75	3	0	0	3
17MBA20 M3/H3/F3/E3	(MRKG/HRM/FIN/ Entrepreneurship )	25	75	3	0	0	3
<b>TOTAL</b>		<b>150</b>	<b>450</b>	<b>18</b>	<b>3</b>	<b>0</b>	<b>21</b>

#### IV Semester

Course Code	Course Title	Intl marks	Ext marks	L	T	P	C
17MBA21	Strategic Management	25	75	3	1	0	4
17MBA22 M4/H4/F4/E4	(MRKG/HRM/FIN/ Entrepreneurship)	25	75	3	0	0	3
17MBA23 M5/H5/F5/E5	(MRKG/HRM/FIN/ Entrepreneurship)	25	75	3	0	0	3
17MBA24 M6/H6/F6/E6	(MRKG/HRM/FIN/ Entrepreneurship)	25	75	3	0	0	3
17MBA25	Pre Submission of Project Work	100	-	0	1	1	1
17MBA26	Comprehensive Viva-Voce	-	100	0	1	1	1
17MBA27	Main Project Viva-Voce	-	100	0	0	5	2
<b>TOTAL</b>		<b>200</b>	<b>500</b>	<b>12</b>	<b>3</b>	<b>7</b>	<b>17</b>

#### LIST OF ELECTIVE SUBJECTS

Students have to select any One Specialization (Marketing, Finance, Human Resources, and Entrepreneurship) and he/she needs to select the Core Elective subjects listed under the chosen specialization only.

Course Code	MARKETING	Credits
17MBA18 M1	Digital Marketing	3
17MBA19 M2	Advertising and Sales Management	3
17MBA20 M3	Consumer Behaviour	3
17MBA22M4	Customer Relationship Management	3
17MBA23M5	International Marketing	3
17MBA24M6	Marketing of Services	3
<b>FINANCE</b>		
17MBA18F1	Security Analysis and Portfolio Management	3
17MBA19F2	Financial Institutions, Markets & Services	3
17MBA20F3	Strategic Management Accounting	3
17MBA22F4	International Financial Management	3
17MBA23F5	Strategic Investment and Financing Decisions	3
17MBA24F6	Risk Management	3
<b>HUMAN RESOURCES</b>		
17MBA18H1	Performance Management Systems	3
17MBA19H2	Learning and Development	3

17MBA20H3	Management of Industrial Relations	3
17MBA22H4	International Human Resource Management	3
17MBA23H5	Leadership and Change Management	3
17MBA24H6	Talent and Knowledge Management	3
<b>ENTREPRENEURSHIP</b>		
17MBA18E1	Start up Management	3
17MBA19E2	MSME Management	3
17MBA20E3	Family Business Management	3
17MBA22E4	Entrepreneurial Finance	3
17MBA23E5	Entrepreneurial Marketing	3
17MBA24E6	Creativity Innovation and Entrepreneurship	3

  
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## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.TECH I YEAR COURSE STRUCTURE AND SYLLABUS (R16)  
(Common for EEE, ECE, CSE, EIE, BME, IT, ETE, ECM, ICE)

Applicable From 2017-18 Admitted Batch

## I YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics-I	3	1	0	3
2	CH102BS	Engineering Chemistry	4	0	0	4
3	PH103BS	Engineering Physics-I	3	0	0	3
4	EN104HS	Professional Communication in English	3	0	0	3
5	ME105ES	Engineering Mechanics	3	0	0	3
6	EE106ES	Basic Electrical and Electronics Engineering	4	0	0	4
7	EN107HS	English Language Communication Skills Lab	0	0	3	2
8	ME108ES	Engineering Workshop	0	0	3	2
9	*EA109MC	NSS	0	0	0	0
		<b>Total Credits</b>	<b>20</b>	<b>1</b>	<b>6</b>	<b>24</b>

## I YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	PH201BS	Engineering Physics-II	3	0	0	3
2	MA202BS	Mathematics-II	4	1	0	4
3	MA203BS	Mathematics-III	4	1	0	4
4	CS204ES	Computer Programming in C	3	0	0	3
5	ME205ES	Engineering Graphics	2	0	4	4
6	CH206BS	Engineering Chemistry Lab	0	0	3	2
7	PH207BS	Engineering Physics Lab	0	0	3	2
8	CS208ES	Computer Programming in C Lab	0	0	3	2
9	*EA209MC	NCC/NSO	0	0	0	0
		<b>Total Credits</b>	<b>16</b>	<b>2</b>	<b>13</b>	<b>24</b>

\*Mandatory Course – Satisfactory/Unsatisfactory.

## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.TECH. ELECTRONICS AND COMMUNICATION ENGINEERING  
II, III, IV YEARS COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch

## II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA301BS	Mathematics – IV	4	1	0	4
2	EC302ES	Analog Electronics	4	1	0	4
3	EC303ES	Electrical Technology	4	1	0	4
4	EC304ES	Signals and Stochastic Process	3	1	0	3
5	EC305ES	Network Analysis	3	1	0	3
6	EC306ES	Electronic Devices and Circuits Lab	0	0	3	2
7	EC307ES	Basic Simulation Lab	0	0	3	2
8	EC308ES	Basic Electrical Engineering Lab	0	0	3	2
9	*MC300ES	Environmental Science and Technology	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>5</b>	<b>9</b>	<b>24</b>

## II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC401ES	Switching Theory and Logic Design	3	1	0	3
2	EC402ES	Pulse and Digital Circuits	4	0	0	4
3	EE404ES	Control Systems	4	1	0	4
4	EC405ES	Analog Communications	4	0	0	4
5	SM405MS	Business Economics and Financial Analysis	3	0	0	3
6	EC406ES	Analog Communications Lab	0	0	3	2
7	EC407ES	Pulse and Digital Circuits Lab	0	0	3	2
8	EC408ES	Analog Electronics Lab	0	0	3	2
9	*MC400HS	Gender Sensitization Lab	0	0	3	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>12</b>	<b>24</b>

## III YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	EC501PC	Electromagnetic Theory and Transmission Lines	4	1	0	4
2	EC502PC	Linear and Digital IC Applications	4	0	0	4
3	EC503PC	Digital Communications	4	1	0	4
4	SM504MS	Fundamentals of Management	3	0	0	3
5		Open Elective - I	3	0	0	3
6	EC505PC	Linear IC Applications Lab	0	0	3	2
7	EC506PC	Digital IC Applications Lab	0	0	3	2
8	EC507PC	Digital Communications Lab	0	0	3	2
9	*MC500HS	Professional Ethics	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>2</b>	<b>9</b>	<b>24</b>

## III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1		Open Elective-II	3	0	0	3
2		Professional Elective-I	3	0	0	3
3	EC601PC	Antennas and Wave Propagation	4	0	0	4
4	EC602PC	Microprocessors and Microcontrollers	4	0	0	4
5	EC603PC	Digital Signal Processing	4	0	0	4
6	EC604PC	Digital Signal Processing Lab	0	0	3	2
7	EC605PC	Microprocessors and Microcontrollers Lab	0	0	3	2
8	EN606HS	Advanced English Communication Skills Lab	0	0	3	2
		<b>Total Credits</b>	<b>18</b>	<b>0</b>	<b>9</b>	<b>24</b>

During Summer Vacation between III and IV Years: Industry Oriented Mini Project

## IV YEAR I SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1	EC701PC	Microwave Engineering	4	0	0	4
2		Professional Elective - II	3	0	0	3
3		Professional Elective - III	3	0	0	3
4		Professional Elective - IV	3	0	0	3
5	EC702PC	VLSI Design	4	0	0	4

6	EC703PC	VLSI and E-CAD Lab	0	0	3	2
7	EC704PC	Microwave Engineering Lab	0	0	3	2
8	EC705PC	Industry Oriented Mini Project	0	0	3	2
9	EC706PC	Seminar	0	0	2	1
		<b>Total Credits</b>	<b>17</b>	<b>0</b>	<b>11</b>	<b>24</b>

**IV YEAR II SEMESTER**

S.No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective – III	3	0	0	3
2		Professional Elective -V	3	0	0	3
3		Professional Elective -VI	3	0	0	3
4	EC801PC	Major Project	0	0	30	15
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>30</b>	<b>24</b>

**Professional Elective – I**

EC611PE	Computer Organization and Operating System
EC612PE	Digital Image Processing
EC613PE	Spread Spectrum Communications
EC614PE	Digital system Design

**Professional Elective – II**

EC721PE	Computer Networks
EC722PE	FPGA Programming
EC723PE	Coding Theory and Techniques
EC724PE	Soft Computing Techniques

**Professional Elective – III**

EC731PE	Wireless Communications and Networks
EC732PE	Internet of Things
EC733PE	Radar Systems
EC734PE	Embedded Sytem Design

**Professional Elective – IV**

EC741PE	Optimization Techniques
EC742PE	Object Oriented Programming
EC743PE	Electronic Measurements and Instrumentation
EC744PE	Artificial Intelligence

**Professional Elective – V**

EC851PE	Network Security and Cryptography
EC852PE	System Design Using FPGAs
EC853PE	Optical Communications
EC854PE	Machine Learning

## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

**B.TECH. I YEAR COURSE STRUCTURE AND SYLLABUS (R16)**  
(Common for Civil, ME, AE, ME (M), MME, AU, Mining, Petroleum, CEE, ME (Nanotech))

Applicable From 2017-18 Admitted Batch

## I YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics-I	3	1	0	3
2	MA102BS	Mathematics-II	4	1	0	4
3	PH103BS	Engineering Physics	3	0	0	3
4	CS104ES	Computer Programming in C	3	0	0	3
5	ME105ES	Engineering Mechanics	3	0	0	3
6	ME106ES	Engineering Graphics	2	0	4	4
7	PH107BS	Engineering Physics Lab	0	0	3	2
8	CS108ES	Computer Programming in C Lab	0	0	3	2
9	*EA109MC	NSS	0	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>10</b>	<b>24</b>

## I YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	AP201BS	Applied Physics	3	0	0	3
2	CH202BS	Engineering Chemistry	4	0	0	4
3	MA203BS	Mathematics-III	4	1	0	4
4	EN204HS	Professional Communication in English	3	0	0	3
5	EE205ES	Basic Electrical and Electronics Engineering	4	0	0	4
6	CH206BS	Engineering Chemistry Lab	0	0	3	2
7	EN207HS	English Language Communication Skills Lab	0	0	3	2
8	ME208ES	Engineering Workshop	0	0	3	2
9	*EA209MC	NCC/NSO	0	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>1</b>	<b>9</b>	<b>24</b>

\*Mandatory Course- Satisfactory/Unsatisfactory

## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.TECH. CIVIL ENGINEERING  
II, III, IV YEARS COURSE STRUCTURE & SYLLABUS (R16)

Admitted From 2016-17 Admitted Batch

## II YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	MA301BS	Mathematics - IV	4	1	0	4
2	CE302ES	Strength of Materials - I	4	1	0	4
3	CE303ES	Fluid Mechanics - I	4	1	0	4
4	CE304ES	Building Materials, Construction and Planning	3	0	0	3
5	CE305ES	Surveying	3	0	0	3
6	CE306ES	Strength of Material Lab	0	0	3	2
7	CE307ES	Computer Aided Drafting Lab	0	0	3	2
8	CE308ES	Surveying Lab - I	0	0	3	2
9	*MC300HS	Gender Sensitization Lab	0	0	3	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>12</b>	<b>24</b>

## II YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CE401ES	Strength of Material - II	4	1	0	4
2	CE402ES	Fluid Mechanics - II	4	1	0	4
3	CE403ES	Structural Analysis	4	1	0	4
4	CV404ES	Engineering Geology	3	0	0	3
5	SM405MS	Business Economic and Financial Analysis	3	0	0	3
6	CE406ES	Fluid Mechanics Lab	0	0	3	2
7	CE408ES	Surveying Lab - II	0	0	3	2
8	CV407ES	Engineering Geology Lab	0	0	3	2
9	*MC400ES	Environmental Science and Technology	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>3</b>	<b>9</b>	<b>24</b>



## III YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CE501PC	Concrete Technology	4	0	0	4
2	CE502PC	Design of Reinforced Concrete Structures	4	1	0	4
3	CE503PC	Water Resources Engineering	4	0	0	4
4	SM504MS	Fundamentals of Management	3	0	0	3
5		Open Elective -I	3	0	0	3
6	CE505PC	Concrete Technology Lab	0	0	3	2
7	CE506PC	Geographical Information Systems Lab	0	0	3	2
8	CE507PC	Hydraulics and Hydraulic Machinery Lab	0	0	3	2
9	MC500HS	Professional Ethics	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>1</b>	<b>9</b>	<b>24</b>

## III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CE601PC	Design of Steel Structures	4	1	0	4
2	CE602PC	Environmental Engineering	4	0	0	4
3	CE603PC	Soil Mechanics	4	0	0	4
4		Open Elective-II	3	0	0	3
5		Professional Elective-I	3	0	0	3
6	CE604PC	Soil Mechanics Lab	0	0	3	2
7	CE605PC	Computer Aided Drafting - II Lab	0	0	3	2
8	EN606HS	Advanced English Communication Skills Lab	0	0	3	2
		<b>Total Credits</b>	<b>18</b>	<b>1</b>	<b>9</b>	<b>24</b>

\*During Sumer Vacation between III and IV Years: Industry Oriented Mini Project

## IV YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CE701PC	Transportation Engineering	4	0	0	4
2	CE702PC	Estimation Quantity Surveying and Valuation	4	1	0	4
3		Professional Elective - II	3	0	0	3
4		Professional Elective - III	3	0	0	3
5		Professional Elective -IV	3	0	0	3
6	CE703PC	Transportation Engineering Lab	0	0	3	2
7	CE704PC	Environmental Engineering Lab	0	0	3	2
8	CE705PC	Industry Oriented Mini Project	0	0	3	2
9	CE706PC	Seminar	0	0	2	1
		<b>Total Credits</b>	<b>17</b>	<b>1</b>	<b>11</b>	<b>24</b>

## IV YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1		Open Elective - III	3	0	0	3
2		Professional Elective -V	3	0	0	3
3		Professional Elective -VI	3	0	0	3
4	CE801PC	Major Project	0	0	30	15
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>30</b>	<b>24</b>

## Professional Elective - I

CE611PE	Air Pollution and Control.
CE612PE	Advanced Structural Analysis.
CE613PE	Ground Water Development and Management.
CE614PE	Earth and Rock fill Dams and Slope Stability.

## Professional Elective – II

CE721PE	Stochastic Hydrology.
CE722PE	Construction Technology and Management.
CE723PE	Foundation Engineering.
CE724PE	Rehabilitation and Retrofitting of Structures.

## Professional Elective – III

CE731PE	Watershed Management.
CE732PE	Prestressed Concrete.
CE733PE	Ground Improvement Techniques.
CE734PE	Railway and Airport Engineering.

## Professional Elective – IV

CE741PE	Traffic Engineering.
CE742PE	Bridge Engineering.
CE743PE	Soil Dynamics and Machine Foundation.
CE744PE	Irrigation and Hydraulic Structures.

## Professional Elective – V

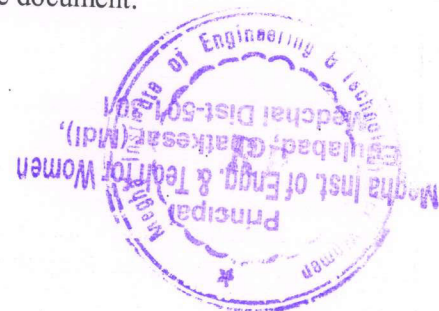
CE851PE	Waste Management.
CE852PE	Pavement Design.
CE853PE	Elements of Earthquake Engineering.
CE854PE	Water Resources Systems Analysis.

## Professional Elective – VI

CE861PE	Finite Element Methods for Civil Engineering.
CE862PE	Geoenvironmental Engineering.
CE863PE	Design and Drawing of Irrigation Structures.
CE864PE	Industrial Waste Water Treatment.

\*Open Elective subjects' syllabus is provided in a separate document.

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With effect from 02/08/2016

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

**B.Tech COURSE STRUCTURE (2016-17)**  
(Common for EEE, ECE, CSE, EIE, BME, IT, ETE, ECM, ICE)

**I YEAR I SEMESTER**

S. No	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics-I	3	1	0	3
2	CH102BS	Engineering Chemistry	4	0	0	4
3	PH103BS	Engineering Physics-I	3	0	0	3
4	EN104HS	Professional Communication in English	3	0	0	3
5	ME105ES	Engineering Mechanics	3	0	0	3
6	EE106ES	Basic Electrical and Electronics Engineering	4	0	0	4
7	EN107HS	English Language Communication Skills Lab	0	0	3	2
8	ME108ES	Engineering Workshop	0	0	3	2
9	*EA109MC	NSS	0	0	0	0
		<b>Total Credits</b>	<b>20</b>	<b>1</b>	<b>6</b>	<b>24</b>

**I YEAR II SEMESTER**

S. No	Course Code	Course Title	L	T	P	Credits
1	PH201BS	Engineering Physics-II	3	0	0	3
2	MA202BS	Mathematics-II	4	1	0	4
3	MA203BS	Mathematics-III	4	1	0	4
4	CS204ES	Computer Programming in C	3	0	0	3
5	ME205ES	Engineering Graphics	2	0	4	4
6	CH206BS	Engineering Chemistry Lab	0	0	3	2
7	PH207BS	Engineering Physics Lab	0	0	3	2
8	CS208ES	Computer Programming in C Lab	0	0	3	2
9	*EA209MC	NCC/NSO	0	0	0	0
		<b>Total Credits</b>	<b>16</b>	<b>2</b>	<b>13</b>	<b>24</b>

\* Mandatory Course.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.TECH. ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE STRUCTURE & SYLLABUS (2016 - 17)

II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA301BS	Mathamatics – IV	4	1	0	4
2	EE302ES	Electromagnetic Fields	4	1	0	4
3	EE303ES	Electrical Machines-I	4	1	0	4
4	EE304ES	Network Theory	3	0	0	3
5	EE305ES	Electronic Circuits	3	0	0	3
6	EE306ES	Electrical Machines Lab - I	0	0	3	2
7	EC306ES	Electronic Devices & Circuits Lab	0	0	3	2
8	EE307ES	Networks Lab	0	0	3	2
9	*MC300ES	Environmental Science and Technology	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>3</b>	<b>9</b>	<b>24</b>

II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC401ES	Switching Theory & Logic Design	3	1	0	3
2	EE402ES	Power Systems - I	4	1	0	4
3	EE403ES	Electrical Machines – II	4	1	0	4
4	EE404ES	Control Systems	4	1	0	4
5	SM405MS	Business Economics and Financial Analysis	3	0	0	3
6	EE406ES	Control Systems Lab	0	0	3	2
7	EE407ES	Electrical Machines Lab - II	0	0	3	2
8	EE408ES	Electronic Circuits Lab	0	0	3	2
9	*MC400HS	Gender Sensitization Lab	0	0	3	0
		<b>Total Credits</b>	<b>18</b>	<b>4</b>	<b>12</b>	<b>24</b>

## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.TECH. ELECTRICAL AND ELECTRONICS ENGINEERING  
III YEAR COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch

## III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EE501PC	Electrical Measurements & Instrumentation	4	1	0	4
2	EE502PC	Power Systems - II	4	1	0	4
3	EI503PC	Microprocessors and Microcontrollers	4	1	0	4
4	SM504MS	Fundamentals of Management	3	0	0	3
5		Open Elective - I	3	0	0	3
6	EE505PC	Electrical Measurements & Instrumentation Lab	0	0	3	2
7	EE506PC	Basic Electrical simulation Lab	0	0	3	2
8	EI507PC	Microprocessors and Microcontrollers Lab	0	0	3	2
9	*MC500HS	Professional Ethics	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>3</b>	<b>9</b>	<b>24</b>

## III YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EE601PC	Power Systems Analysis	4	1	0	4
2	EE602PC	Power Electronics	4	1	0	4
3	EE603PC	Switch Gear and Protection	4	1	0	4
4		Open Elective - II	3	0	0	3
5		Professional Elective - I	3	0	0	3
6	EE604PC	Power Systems Lab	0	0	3	2
7	EE605PC	Power Electronics Lab	0	0	3	2
8	EN606HS	Advanced English Communication Skills Lab	0	0	3	2
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>9</b>	<b>24</b>

During Summer Vacation between III and IV Years: Industry Oriented Mini Project

## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.TECH. ELECTRICAL AND ELECTRONICS ENGINEERING  
IV YEAR COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch

## IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EE701PC	Power Semiconductor Drives	4	1	0	4
2	EE702PC	Power System Operation and control	4	1	0	4
3		Professional Elective - II	3	0	0	3
4		Professional Elective - III	3	0	0	3
5		Professional Elective - IV	3	0	0	3
6	EE703PC	Electrical Systems Simulation Lab	0	0	3	2
7	EE704PC	Electrical Workshop	0	0	3	2
8	EE705PC	Industry Oriented Mini Project	0	0	3	2
9	EE706PC	Seminar	0	0	2	1
		<b>Total Credits</b>	<b>17</b>	<b>2</b>	<b>11</b>	<b>24</b>

## IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Open Elective - III	3	0	0	3
2		Professional Elective-V	3	0	0	3
3		Professional Elective-VI	3	0	0	3
4	EE801PC	Major Project	0	0	30	15
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>30</b>	<b>24</b>

**Professional Elective - I (PE - I):**

EM611PE	Computer Organization
EE612PE	Linear Systems Analysis
EE613PE	Linear and Digital IC Applications
EE614PE	Electrical and Electronics Instrumentation

**Professional Elective - II (PE - II):**

EE721PE	Digital Signal Processing
EE722PE	Digital Control Systems
ET721PE	VLSI Design
EE724PE	Programmable Logic Controllers

**Professional Elective - III (PE - III):**

EE731PE	HVDC Transmission
EE732PE	Reliability Engineering
EE733PE	Optimization Techniques
EE734PE	Utilization of Electric Power

**Professional Elective - IV (PE-IV):**

EE741PE	Switch Mode Power Supplies
EE742PE	Artificial Neural Networks and Fuzzy Systems
EE743PE	Electrical Distribution Systems
EE744PE	High Voltage Engineering

**Professional Elective - V (PE-V):**

EE851PE	Smart Electric Grid
EE852PE	Solar Photovoltaic Systems
EE853PE	Modern Power Electronics
EE854PE	Special Machines

**Professional Elective - VI (PE-VI):**

EE861PE	FACTS
EE862PE	Embedded Systems
EE863PE	Power Quality
EE864PE	EHV AC Transmission Systems

\*Open Elective subjects' syllabus is provided in a separate document.

\*Open Elective – Students should take Open Electives from the List of Open Electives Offered by Other Departments/Branches Only.

Ex: - A Student of Mechanical Engineering can take Open Electives from all other departments/branches except Open Electives offered by Mechanical Engineering Dept.

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R16 B.TECH CSE.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

**B.TECH I YEAR COURSE STRUCTURE AND SYLLABUS (R16)**  
(Common for EEE, ECE, CSE, EIE, BME, IT, ETE, ECM, ICE)

Applicable From 2017-18 Admitted Batch

**I YEAR I SEMESTER**

S. No	Course Code	Course Title	L	T	P	Credits
1	MA101BS	Mathematics-I	3	1	0	3
2	CH102BS	Engineering Chemistry	4	0	0	4
3	PH103BS	Engineering Physics-I	3	0	0	3
4	EN104HS	Professional Communication in English	3	0	0	3
5	ME105ES	Engineering Mechanics	3	0	0	3
6	EE106ES	Basic Electrical and Electronics Engineering	4	0	0	4
7	EN107HS	English Language Communication Skills Lab	0	0	3	2
8	ME108ES	Engineering Workshop	0	0	3	2
9	*EA109MC	NSS	0	0	0	0
		<b>Total Credits</b>	<b>20</b>	<b>1</b>	<b>6</b>	<b>24</b>

**I YEAR II SEMESTER**

S. No	Course Code	Course Title	L	T	P	Credits
1	PH201BS	Engineering Physics-II	3	0	0	3
2	MA202BS	Mathematics-II	4	1	0	4
3	MA203BS	Mathematics-III	4	1	0	4
4	CS204ES	Computer Programming in C	3	0	0	3
5	ME205ES	Engineering Graphics	2	0	4	4
6	CH206BS	Engineering Chemistry Lab	0	0	3	2
7	PH207BS	Engineering Physics Lab	0	0	3	2
8	CS208ES	Computer Programming in C Lab	0	0	3	2
9	*EA209MC	NCC/NSO	0	0	0	0
		<b>Total Credits</b>	<b>16</b>	<b>2</b>	<b>13</b>	<b>24</b>

\*Mandatory Course – Satisfactory/Unsatisfactory.



R16 B.TECH CSE.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.TECH. COMPUTER SCIENCE AND ENGINEERING  
II, III, IV YEARS COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch

II YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	MA301BS	Mathematics – IV	4	1	0	4
2	CS302ES	Data Structures through C++	4	0	0	4
3	CS303ES	Mathematical Foundations of Computer Science	4	0	0	4
4	CS304ES	Digital Logic Design	3	0	0	3
5	CS305ES	Object Oriented Programming through Java	3	0	0	3
6	CS306ES	Data Structures through C++ Lab	0	0	3	2
7	CS307ES	IT Workshop	0	0	3	2
8	CS308ES	Object Oriented Programming through Java Lab	0	0	3	2
9	* MC300ES	Environmental Science and Technology	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>1</b>	<b>9</b>	<b>24</b>

II YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CS401BS	Computer Organization	4	0	0	4
2	CS402ES	Database Management Systems	4	0	0	4
3	CS403ES	Operating Systems	4	0	0	4
4	CS404ES	Formal Languages and Automata Theory	3	0	0	3
5	SM405MS	Business Economics and Financial Analysis	3	0	0	3
6	CS406ES	Computer Organization Lab	0	0	3	2
7	CS407ES	Database Management Systems Lab	0	0	3	2
8	CS408ES	Operating Systems Lab	0	0	3	2
9	* MC400HS	Gender Sensitization Lab	0	0	3	0
		<b>Total Credits</b>	<b>18</b>	<b>0</b>	<b>12</b>	<b>24</b>

## III YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CS501PC	Design and Analysis of Algorithms	4	0	0	4
2	CS502PC	Data Communication and Computer Networks	4	0	0	4
3	CS503PC	Software Engineering	4	0	0	4
4	SM504MS	Fundamentals of Management	3	0	0	3
5		Open Elective -I	3	0	0	3
6	CS505PC	Design and Analysis of Algorithms Lab	0	0	3	2
7	CS506PC	Computer Networks Lab	0	0	3	2
8	CS507PC	Software Engineering Lab	0	0	3	2
9	*MC500HS	Professional Ethics	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>0</b>	<b>9</b>	<b>24</b>

## III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CS601PC	Compiler Design	4	0	0	4
2	CS602PC	Web Technologies	4	0	0	4
3	CS603PC	Cryptography and Network Security	4	0	0	4
4		Open Elective-II	3	0	0	3
5		Professional Elective-I	3	0	0	3
6	CS604PC	Cryptography and Network Security Lab	0	0	3	2
7	CS605PC	Web Technologies Lab	0	0	3	2
8	EN606HS	Advanced English Communication Skills Lab	0	0	3	2
		<b>Total Credits</b>	<b>18</b>	<b>0</b>	<b>9</b>	<b>24</b>

During Summer Vacation between III and IV Years: Industry Oriented Mini Project

## IV YEAR I SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1	CS701PC	Data Mining	4	0	0	4
2	CS702PC	Principles of Programming Languages	4	0	0	4
3		Professional Elective - II	3	0	0	3
4		Professional Elective - III	3	0	0	3
5		Professional Elective - IV	3	0	0	3
6	CS703PC	Data Mining Lab	0	0	3	2
7		PE-II Lab #	0	0	3	2
	CS751PC	Python Programming Lab				
	CS752PC	Mobile Application Development Lab				

## R16 B.TECH CSE.

	CS753PC	Web Scripting Languages Lab				
	CS754PC	Internet of Things Lab				
8	CS705PC	Industry Oriented Mini Project	0	0	3	2
9	CS706PC	Seminar	0	0	2	1
		<b>Total Credits</b>	<b>17</b>	<b>0</b>	<b>11</b>	<b>24</b>

# Courses in PE - II and PE - II Lab must be in 1-1 correspondence.

## IV YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1		Open Elective – III	3	0	0	3
2		Professional Elective – V	3	0	0	3
3		Professional Elective – VI	3	0	0	3
4	CS801PC	Major Project	0	0	30	15
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>30</b>	<b>24</b>

## Professional Elective – I

CS611PE	Mobile Computing
CS612PE	Design Patterns
CS613PE	Artificial Intelligence
CS614PE	Information Security Management (Security Analyst - I)
CS615PE	Introduction to Analytics (Associate Analytics - I)

## Professional Elective – II

CS721PE	Python Programming
CS722PE	Mobile Application Development
CS723PE	Web Scripting Languages
CS724PE	Internet of Things

## Professional Elective - III

CS731PE	Graph Theory
CS732PE	Distributed Systems
CS733PE	Machine Learning
CS734PE	Software Process and Project Management

## Professional Elective - IV

CS741PE	Computational Complexity
CS742PE	Cloud Computing
CS743PE	Blockchain Technology
CS744PE	Social Network Analysis

R16 B.TECH CSE.

**Professional Elective - V**

CS851PE	Information Theory & Coding
CS852PE	Real-Time Systems
CS853PE	Data Analytics
CS854PE	Modern Software Engineering

**Professional Elective - VI**

CS861PE	Advanced Algorithms
CS862PE	Web Services and Service Oriented Architecture
CS863PE	Computer Forensics
CS864PE	Neural Networks and Deep Learning

\*Open Elective subjects' syllabus is provided in a separate document.

\*Open Elective – Students should take Open Electives from the List of Open Electives Offered by Other Departments/Branches Only.

Ex: - A Student of Mechanical Engineering can take Open Electives from all other departments/branches except Open Electives offered by Mechanical Engineering Dept.

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD  
LIST OF OPEN ELECTIVES OFFERED BY VARIOUS DEPARTMENTS FOR  
B.TECH. III AND IV YEARS**

S. No.	Name of the Department Offering Open Electives	Open Elective – I (Semester – V)	Open Elective – II (Semester – VI)
1	Aeronautical Engg.	AE511OE: Introduction to Space Technology	AE621OE: Introduction to Aerospace Engineering
2	Automobile Engg.	CE511OE: Disaster Management MT512OE: Intellectual Property Rights	MT621OE: Data Structures MT622OE: Artificial Neural Networks
3	Biomedical Engg.	BM511OE: Reliability Engineering	BM621OE: Medical Electronics
4	Civil Engg.	CE511OE: Disaster Management.	CE621OE: Remote Sensing and GIS CE622OE: Geo-Informatics CE623OE: Intellectual Property Rights
5	Civil and Environmental Engg.	CE511OE: Disaster Management	CN621OE: Environmental Impact Assessment CE623OE: Intellectual Property Rights
6	Computer Science and Engg. / Information Technology	CS511OE: Operating Systems CS512OE: Database Management Systems	CS621OE: Java Programming CS622OE: Software Testing Methodologies CS623OE: Cyber Security
7	Electronics and Communication Engg. / Electronics and Telematics Engg.	EC511OE: Principles of Electronic Communications	EC621OE: Principles of Computer Communications and Networks
8	Electronics and Computer Engg.	EM511OE: Scripting Languages	EM621OE: Soft Computing Techniques
9	Electrical and Electronics Engg.	EE511OE: Non-Conventional Power Generation EE512OE: Electrical Engineering Materials EE513OE: Nanotechnology	EE621OE: Design Estimation and Costing of Electrical Systems EE622OE: Energy Storage Systems EE623OE: Introduction to Mechatronics
10	Electronics and Instrumentation Engg.	EI511OE: Electronic Measurements and Instrumentation	EI621OE: Industrial Electronics
11	Mechanical Engg.	ME511OE: Optimization Techniques ME512OE: Computer Graphics ME513OE: Introduction	ME621OE: World Class Manufacturing ME622OE: Fundamentals of Robotics ME623OE: Fabrication

		to Mechatronics ME514OE: Fundamentals of Mechanical Engineering	Processes
12	Mechanical Engg. (Material Science and Nanotechnology)	NT511OE: Fabrication Processes NT512OE: Nondestructive Testing Methods NT513OE: Fundamentals of Engineering Materials	NT621OE: Introduction to Material Handling NT622OE: Non-Conventional Energy Sources NT623OE: Robotics
13	Mechanical Engg. (mechatronics)	MT511OE: Analog and Digital I.C. Applications MT512OE: Intellectual Property Rights MT513OE: Computer Organization	MT621OE: Data Structures MT622OE: Artificial Neural Networks MT623OE: Industrial Management
14	Metallurgical and Materials Engg.	MM511OE: Materials Characterization Techniques	MM621OE: Science and Technology of Nano Materials MM622OE: Metallurgy of Non Metallurgists
15	Mining Engg.	MN511OE: Introduction to Mining Technology	MN621OE: Coal Gasification, Coal Bed Methane and Shale Gas
16	Petroleum Engg.	PE511OE: Materials Science and Engineering PE512OE: Renewable Energy Sources PE513OE: Environmental Engineering	PE621OE: Energy Management and Conservation PE622OE: Optimization Techniques PE623OE: Entrepreneurship and Small Business Enterprises


S. No.	Name of the Department Offering Open Electives	Open Elective –III (Semester – VIII)
1	Aeronautical Engg.	AE831OE: Air Transportation Systems AE832OE: Rockets and Missiles
2	Automobile Engg.	AM831OE: Introduction to Mechatronics AM832OE: Microprocessors and Microcontrollers
3	Biomedical Engg.	BM831OE: Telemetry and Telecontrol BM832OE: Electromagnetic Interference and Compatibility
4	Civil Engg.	CE831OE: Environmental Impact Assessment CE832OE: Optimization Techniques in Engineering CE833OE: Entrepreneurship and Small Business Enterprises
5	Civil and Environmental Engg.	CN831OE: Remote Sensing and GIS CE833OE: Entrepreneurship and Small Business

R16 B.TECH CSE.

		Enterprises
6	Computer Science and Engg. / Information Technology	CS831OE: Linux Programming CS832OE: R Programming CS833OE: PHP Programming
7	Electronics and Communication Engg. / Electronics and Telematics Engg.	EC831OE: Electronic Measuring Instruments
8	Electronics and Computer Engg.	EM831OE: Data Analytics
9	Electrical and Electronics Engg.	EE831OE: Entrepreneur Resource Planning EE832OE: Management Information Systems EE833OE: Organizational Behaviour
10	Electronics and Instrumentation Engg.	EI831OE: Sensors and Transducers, EI832OE: PC Based Instrumentation
11	Mechanical Engg.	ME831OE: Total Quality Management ME832OE: Industrial Safety, Health, and Environmental Engineering ME833OE: Basics of Thermodynamics ME834OE: Reliability Engineering
12	Mechanical Engg. (Material Science and Nanotechnology)	NT831OE: Concepts of Nano Science And Technology NT832OE: Synthesis of Nanomaterials NT833OE: Characterization of Nanomaterials
13	Mechanical Engg. (mechatronics)	MT831OE: Renewable Energy Sources MT832OE: Production Planning and Control CE833OE: Entrepreneurship and Small Business Enterprises
14	Metallurgical and Materials Engg.	MM831OE: Design and Selection of Engineering Materials
15	Mining Engg.	MN831OE: Solid Fuel Technology MN832OE: Health & Safety in Mines
16	Petroleum Engg.	PE831OE: Disaster Management PE832OE: Fundamentals of Liquefied Natural Gas PE833OE: Health, Safety and Environment in Petroleum Industry

**\*Open Elective** – Students should take Open Electives from List of Open Electives Offered by Other Departments/Branches Only.

**Ex:** - A Student of Mechanical Engineering can take Open Electives from all other departments/branches except Open Electives offered by Mechanical Engineering Dept.

  
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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.TECH. COMPUTER SCIENCE AND ENGINEERING  
IV YEAR COURSE STRUCTURE & SYLLABUS (R16)**

**Applicable From 2016-17 Admitted Batch**

**IV YEAR I SEMESTER**

S. No	Course Code	Course Title	L	T	P	Credits
1	CS701PC	Data Mining	4	0	0	4
2	CS702PC	Principles of Programming Languages	4	0	0	4
3		Professional Elective – II	3	0	0	3
4		Professional Elective – III	3	0	0	3
5		Professional Elective – IV	3	0	0	3
6	CS703PC	Data Mining Lab	0	0	3	2
7		PE-II Lab #	0	0	3	2
	CS751PC	Python Programming Lab				
	CS752PC	Mobile Application Development Lab				
	CS753PC	Web Scripting Languages Lab				
	CS754PC	Internet of Things Lab				
8	CS705PC	Industry Oriented Mini Project	0	0	3	2
9	CS706PC	Seminar	0	0	2	1
		<b>Total Credits</b>	<b>17</b>	<b>0</b>	<b>11</b>	<b>24</b>

# Courses in PE - II and PE - II Lab must be in 1-1 correspondence.

**IV YEAR II SEMESTER**

S. No	Course Code	Course Title	L	T	P	Credits
1		Open Elective – III	3	0	0	3
2		Professional Elective – V	3	0	0	3
3		Professional Elective – VI	3	0	0	3
4	CS801PC	Major Project	0	0	30	15
		<b>Total Credits</b>	<b>9</b>	<b>0</b>	<b>30</b>	<b>24</b>

**Professional Elective – I**

CS611PE	Mobile Computing
CS612PE	Design Patterns
CS613PE	Artificial Intelligence
CS614PE	Information Security Management (Security Analyst - I)
CS615PE	Introduction to Analytics (Associate Analytics - I)



**Professional Elective – II**

CS721PE	Python Programming
CS722PE	Mobile Application Development
CS723PE	Web Scripting Languages
CS724PE	Internet of Things

**Professional Elective - III**

CS731PE	Graph Theory
CS732PE	Distributed Systems
CS733PE	Machine Learning
CS734PE	Software Process and Project Management

**Professional Elective - IV**

CS741PE	Computational Complexity
CS742PE	Cloud Computing
CS743PE	Blockchain Technology
CS744PE	Social Network Analysis

**Professional Elective - V**

CS851PE	Information Theory & Coding
CS852PE	Real-Time Systems
CS853PE	Data Analytics
CS854PE	Modern Software Engineering

**Professional Elective - VI**

CS861PE	Advanced Algorithms
CS862PE	Web Services and Service Oriented Architecture
CS863PE	Computer Forensics
CS864PE	Neural Networks and Deep Learning

\***Open Elective** subjects' syllabus is provided in a separate document.

\***Open Elective** – Students should take Open Electives from the List of Open Electives Offered by Other Departments/Branches Only.

**Ex:** - A Student of Mechanical Engineering can take Open Electives from all other departments/branches except Open Electives offered by Mechanical Engineering Dept.

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**LIST OF OPEN ELECTIVES OFFERED BY VARIOUS DEPARTMENTS FOR**  
**B.TECH. III AND IV YEARS**

S. No.	Name of the Department Offering Open Electives	Open Elective – I (Semester – V)	Open Elective – II (Semester – VI)
1	Aeronautical Engg.	AE511OE: Introduction to Space Technology	AE621OE: Introduction to Aerospace Engineering
2	Automobile Engg.	CE511OE: Disaster Management MT512OE: Intellectual Property Rights	MT621OE: Data Structures MT622OE: Artificial Neural Networks
3	Biomedical Engg.	BM511OE: Reliability Engineering	BM621OE: Medical Electronics
4	Civil Engg.	CE511OE: Disaster Management.	CE621OE: Remote Sensing and GIS CE622OE: Geo-Informatics CE623OE: Intellectual Property Rights
5	Civil and Environmental Engg.	CE511OE: Disaster Management	CN621OE: Environmental Impact Assessment CE623OE: Intellectual Property Rights
6	Computer Science and Engg. / Information Technology	CS511OE: Operating Systems CS512OE: Database Management Systems	CS621OE: Java Programming CS622OE: Software Testing Methodologies CS623OE: Cyber Security
7	Electronics and Communication Engg. / Electronics and Telematics Engg.	EC511OE: Principles of Electronic Communications	EC621OE: Principles of Computer Communications and Networks
8	Electronics and Computer Engg.	EM511OE: Scripting Languages	EM621OE: Soft Computing Techniques
9	Electrical and Electronics Engg.	EE511OE: Non-Conventional Power Generation EE512OE: Electrical Engineering Materials EE513OE: Nanotechnology	EE621OE: Design Estimation and Costing of Electrical Systems EE622OE: Energy Storage Systems EE623OE: Introduction to Mechatronics
10	Electronics and Instrumentation Engg.	EI511OE: Electronic Measurements and Instrumentation	EI621OE: Industrial Electronics
11	Mechanical Engg.	ME511OE: Optimization Techniques ME512OE: Computer Graphics ME513OE: Introduction	ME621OE: World Class Manufacturing ME622OE: Fundamentals of Robotics ME623OE: Fabrication


		to Mechatronics ME514OE: Fundamentals of Mechanical Engineering	Processes
12	Mechanical Engg. (Material Science and Nanotechnology)	NT511OE: Fabrication Processes NT512OE: Nondestructive Testing Methods NT513OE: Fundamentals of Engineering Materials	NT621OE: Introduction to Material Handling NT622OE: Non-Conventional Energy Sources NT623OE: Robotics
13	Mechanical Engg. (mechatronics)	MT511OE: Analog and Digital I.C. Applications MT512OE: Intellectual Property Rights MT513OE: Computer Organization	MT621OE: Data Structures MT622OE: Artificial Neural Networks MT623OE: Industrial Management
14	Metallurgical and Materials Engg.	MM511OE: Materials Characterization Techniques	MM621OE: Science and Technology of Nano Materials MM622OE: Metallurgy of Non Metallurgists
15	Mining Engg.	MN511OE: Introduction to Mining Technology	MN621OE: Coal Gasification, Coal Bed Methane and Shale Gas
16	Petroleum Engg.	PE511OE: Materials Science and Engineering PE512OE: Renewable Energy Sources PE513OE: Environmental Engineering	PE621OE: Energy Management and Conservation PE622OE: Optimization Techniques PE623OE: Entrepreneurship and Small Business Enterprises

S. No.	Name of the Department Offering Open Electives	Open Elective –III (Semester – VIII)
1	Aeronautical Engg.	AE831OE: Air Transportation Systems AE832OE: Rockets and Missiles
2	Automobile Engg.	AM831OE: Introduction to Mechatronics AM832OE: Microprocessors and Microcontrollers
3	Biomedical Engg.	BM831OE: Telemetry and Telecontrol BM832OE: Electromagnetic Interference and Compatibility
4	Civil Engg.	CE831OE: Environmental Impact Assessment CE832OE: Optimization Techniques in Engineering CE833OE: Entrepreneurship and Small Business Enterprises
5	Civil and Environmental Engg.	CN831OE: Remote Sensing and GIS CE833OE: Entrepreneurship and Small Business

		Enterprises
6	Computer Science and Engg. / Information Technology	CS831OE: Linux Programming CS832OE: R Programming CS833OE: PHP Programming
7	Electronics and Communication Engg. / Electronics and Telematics Engg.	EC831OE: Electronic Measuring Instruments
8	Electronics and Computer Engg.	EM831OE: Data Analytics
9	Electrical and Electronics Engg.	EE831OE: Entrepreneur Resource Planning EE832OE: Management Information Systems EE833OE: Organizational Behaviour
10	Electronics and Instrumentation Engg.	EI831OE: Sensors and Transducers, EI832OE: PC Based Instrumentation
11	Mechanical Engg.	ME831OE: Total Quality Management ME832OE: Industrial Safety, Health, and Environmental Engineering ME833OE: Basics of Thermodynamics ME834OE: Reliability Engineering
12	Mechanical Engg. (Material Science and Nanotechnology)	NT831OE: Concepts of Nano Science And Technology NT832OE: Synthesis of Nanomaterials NT833OE: Characterization of Nanomaterials
13	Mechanical Engg. (mechatronics)	MT831OE: Renewable Energy Sources MT832OE: Production Planning and Control CE833OE: Entrepreneurship and Small Business Enterprises
14	Metallurgical and Materials Engg.	MM831OE: Design and Selection of Engineering Materials
15	Mining Engg.	MN831OE: Solid Fuel Technology MN832OE: Health & Safety in Mines
16	Petroleum Engg.	PE831OE: Disaster Management PE832OE: Fundamentals of Liquefied Natural Gas PE833OE: Health, Safety and Environment in Petroleum Industry

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MASTER OF BUSINESS ADMINISTRATION (MBA) R15

COURSE STRUCTURE AND SYLLABUS

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course II	MANAGEMENT AND ORGANISATIONAL BEHAVIOUR	25	75	3	-	3
Core Course II	BUSINESS LAWS & BUSINESS ENVIRONMENT	25	75	3	-	3
Core Course III	MANAGERIAL ECONOMICS	25	75	3	-	3
Core Course IV	FINANCIAL ACCOUNTING & ANALYSIS	25	75	3	-	3
Core Course V	STATISTICS FOR MANAGEMENT	25	75	3	-	3
Open Elective I	<ul style="list-style-type: none"> <li>• CROSS CULTURE MANAGEMENT</li> <li>• WTO &amp; IPR</li> <li>• TOTAL QUALITY MANAGEMENT</li> <li>• PROJECT MANAGEMENT</li> </ul>	25	75	3	-	3
Laboratory	STATISTICAL DATA ANALYSIS - LAB	50	-	-	4	2
Seminar	BUSINESS COMMUNICATION- SEMINAR	50	-	-	4	2
<b>Total Credits</b>				<b>18</b>	<b>8</b>	<b>22</b>

I Year - II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	HUMAN RESOURCE MANAGEMENT	25	75	3	-	3
Core Course II	MARKETING MANAGEMENT	25	75	3	-	3
Core Course III	FINANCIAL MANAGEMENT	25	75	3	-	3
Core Course IV	QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS	25	75	3	-	3
Core Course V	MIS & ERP	25	75	3	-	3
Open Elective I	<ul style="list-style-type: none"> <li>• FOREIGN TRADE</li> <li>• BANKING, INSURANCE &amp; RISK MANAGEMENT</li> <li>• LOGISTICS &amp; SUPPLY CHAIN MANAGEMENT</li> <li>• MSME MANAGEMENT</li> </ul>	25	75	3	-	3
Laboratory	ANNUAL REPORT ANALYSIS - LAB	50	-	-	4	2
Seminar	SUMMER INTERNSHIP - SEMINAR	50	-	-	4	2
<b>Total Credits</b>				<b>18</b>	<b>8</b>	<b>22</b>

II Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	PRODUCTION & OPERATIONS MANAGEMENT	25	75	3	-	3
Core Course II	STRATEGIC MANAGEMENT	25	75	3	-	3
Core Course III	RESEARCH METHDOLOGY	25	75	3	-	3
Core Elective I	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Core Elective II	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Core Elective III	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Seminar	PERSONAL EFFECTIVENESS - SEMINAR	50	-	-	4	2
Seminar	BUSINESS BEST PRACTICES AND SUCCESS STORIES OF EMERGING LEADERS - SEMINAR	50	-	-	4	2
<b>Total Credits</b>				<b>18</b>	<b>8</b>	<b>22</b>

**II Year - II Semester**

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	ENTREPRENEURSHIP	25	75	3	-	3
Core Course II	MANAGEMENT OF TECHNOLOGY	25	75	3	-	3
Core Elective IV	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Core Elective V	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Core Elective VI	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Seminar	PRE SUBMISSION OF PROJECT –SEMINAR	50	-	-	4	2
	COMPREHENSIVE VIVA	-	100	-	4	2
	PROJECT	25	75	-	-	3
<b>Total Credits</b>				15	8	22

**CORE ELECTIVE STREAMS (choose any one stream subjects as Core Electives)**

<b>MARKETING ELECTIVES</b>
CONSUMER BEHAVIOUR
SALES AND DISTRIBUTION
INTEGRATED MARKETING COMMUNICATIONS
RETAILING MANAGEMENT
SERVICES MARKETING
INTERNATIONAL MARKETING
<b>FINANCE ELECTIVES</b>
STRATEGIC MANAGEMENT ACCOUNTING
SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT
FINANCIAL INSTITUTIONS, MARKETS & SERVICES
STRATEGIC INVESTMENT AND FINANCING DECISIONS
INTERNATIONAL FINANCIAL MANAGEMENT
FINANCIAL DERIVATIVES
<b>HR ELECTIVES</b>
PERFORMANCE MANAGEMENT
TRAINING AND DEVELOPMENT
MANAGEMENT OF INDUSTRIAL RELATIONS
COMPENSATION & REWARD MANAGEMENT
INTERNATIONAL HUMAN RESOURCE MANAGEMENT
LEADERSHIP & CHANGE MANAGEMENT
<b>SYSTEMS ELECTIVES</b>
BUSINESS INTELLIGENCE
DATABASE MANAGEMENT SYSTEMS
DECISION SUPPORT SYSTEMS
E-BUSINESS
KNOWLEDGE MANAGEMENT
INFORMATION SYSTEMS, CONTROL AND AUDIT

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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD.****B. TECH. ELECTRONICS AND COMMUNICATION ENGINEERING****I YEAR**

Code	Subject	L	T/P/D	C
A10001	English	2	-	4
A10002	Mathematics – I	3	1	6
A10003	Mathematical Methods	3	-	6
A10004	Engineering Physics	3	-	6
A10005	Engineering Chemistry	3	-	6
A10501	Computer Programming	3	-	6
A10301	Engineering Drawing	2	3	6
A10581	Computer Programming Lab.	-	3	4
A10081	Engineering Physics / Engineering Chemistry Lab.	-	3	4
A10083	English Language Communication Skills Lab.	-	3	4
A10082	IT Workshop / Engineering Workshop	-	3	4
	<b>Total</b>	<b>19</b>	<b>16</b>	<b>56</b>

**II YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A30007	Mathematics - III	4	-	4
A30405	Probability Theory and Stochastic Processes	4	-	4
A30407	Switching Theory and Logic Design	4	-	4
A30204	Electrical Circuits	4	-	4
A30404	Electronic Devices and Circuits	4	-	4
A30406	Signals and Systems	4	-	4
A30482	Electronic Devices and Circuits Lab.	-	3	2
A30481	Basic Simulation Lab.	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**II YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A40215	Principles of Electrical Engineering	4	-	4
A40412	Electronic Circuit Analysis	4	-	4
A40415	Pulse and Digital Circuits	4	-	4
A40009	Environmental Studies	4	—	4
A40411	Electromagnetic Theory and Transmission Lines	4	-	4
A40410	Digital Design using Verilog HDL	4	-	4
A40288	Electrical Technology Lab.	-	3	2
A40484	Electronic Circuits and Pulse Circuits Lab.	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A50217	Control Systems Engineering	4	-	4
A50516	Computer Organization and Operating Systems	4	-	4
A50418	Antennas and Wave Propagation	4	-	4
A50422	Electronic Measurements and Instrumentation	4	-	4
A50408	Analog Communications	4	-	4
A50425	Linear and Digital IC Applications	4	-	4
A50482	Analog Communications Lab.	-	3	2
A50488	IC Applications and HDL Simulation Lab.	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A60010	Managerial Economics and Financial Analysis	4	-	4
	<b>Open Elective:</b>	4	-	4
A60018	Human Values and Professional Ethics			
A60117	Disaster Management			
A60017	Intellectual Property Rights			
A60420	Digital Communications	4	-	4
A60432	VLSI Design	4	-	4
A60430	Microprocessors and Microcontrollers	4	-	4
A60421	Digital Signal Processing	4	-	4
A60494	Microprocessors and Microcontrollers Lab.	-	3	2
A60493	Digital Signal Processing Lab.	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>




## IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
A70014	Management Science	4	-	4
A70442	Microwave Engineering	4	-	4
A70515	Computer Networks	4	-	4
A70434	Cellular and Mobile Communications	4	-	4
	<b>Elective -I:</b>	4	-	4
A70436	Digital Image Processing			
A70443	Multimedia and Signal Coding			
A70505	Object Oriented Programming through Java			
	<b>Elective -II:</b>	4	-	4
A70447	Television Engineering			
A70444	Optical Communications			
A70440	Embedded Systems Design			
A70086	Advanced Communication Skills Lab,	-	3	2
A70499	Microwave Engineering and Digital Communications Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

## IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	<b>Elective -III:</b>	4	-	4
A80452	Satellite Communications			
A81102	Biomédical Instrumentation			
A80527	Artificial Neural Networks			
	<b>Elective -IV:</b>	4	-	4
A80431	Telecommunication Switching Systems and Networks			
A80450	Radar Systems			
A80449	Network Security			
	<b>Elective -V:</b>	4	-	4
A80454	Wireless Communications and Networks			
A80437	Digital Signal Processors and Architectures			
A80451	RF Circuit Design			
A80087	Industry Oriented Mini Project	-	-	2
A80089	Seminar	-	6	2
A80088	Major Project Work	-	15	10
A80090	Comprehensive Viva	-	-	2
	<b>Total</b>	<b>12</b>	<b>21</b>	<b>28</b>

Note: All End Examinations (Theory and Practical) are of three hours duration.  
T-Tutorial L – Theory P – Practical D-Drawing C – Credits

  
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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD.

## B. TECH. CIVIL ENGINEERING

## I YEAR

Code	Subject	L	T/P/D	C
A10001	English	2	-	4
A10002	Mathematics – I	3	1	6
A10302	Engineering Mechanics	3	-	6
A10004	Engineering Physics	3	-	6
A10005	Engineering Chemistry	3	-	6
A10501	Computer Programming	3	-	6
A10301	Engineering Drawing	2	3	6
A10581	Computer Programming Lab.	-	3	4
A10081	Engineering Physics & Engineering Chemistry Lab.	-	3	4
A10083	English Language Communication Skills Lab.	-	3	4
A10082	IT Workshop / Engineering Workshop	-	3	4
	<b>Total</b>	<b>19</b>	<b>16</b>	<b>56</b>

## II YEAR I SEMESTER

Code	Subject	L	T/P/D	C
A30006	Mathematics – II	4	-	4
A30203	Electrical & Electronics Engineering	4	-	4
A30107	Strength of Materials –I	4	-	4
A30108	Surveying	4	-	4
A30101	Fluid Mechanics	4	-	4
A30010	Managerial Economics and Financial Analysis	4	-	4
A30185	Surveying Lab- I	-	3	2
A30183	Strength of Materials Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**II YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A40008	Probability & Statistics	4	-	4
A40114	Strength of Materials - II	4	-	4
A40111	Hydraulics & Hydraulic Machinery	4	-	4
A40009	Environmental Studies	4	-	4
A40115	Structural Analysis -I	4	-	4
A40109	Building Materials, Construction & Planning	4	-	4
A40186	Computer Aided Drafting of Buildings	-	3	2
A40190	Surveying Lab- II	-	3	2
<b>Total</b>		<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A50116	Concrete Technology	4	-	4
A50121	Reinforced Concrete Structures Design and Drawing	4	-	4
A50118	Engineering Geology	4	-	4
A50120	Geotechnical Engineering	4	-	4
A50122	Water Resources Engineering-I	4	-	4
<b>Open Elective</b>		4	-	4
A50117	Disaster Management			
A50017	Intellectual Property Rights			
A50018	Human Values and Professional Ethics			
A50181	Fluid Mechanics & Hydraulic Machinery Lab	-	3	2
A50191	Engineering Geology Lab	-	3	2
<b>Total</b>		<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A60130	Steel Structures Design and Drawing	3	2	4
A60119	Environmental Engineering	4	-	4
A60132	Transportation Engineering -I	4	-	4
A60126	Foundation Engineering	4	-	4
A60131	Structural Analysis -II	4	-	4
<b>Elective -I</b>		4	-	4
A60123	Elements of Earthquake Engineering			
A60127	Ground Improvement Techniques			
A60128	Ground Water Hydrology			
A60124	Environmental Impact Assessment			
A60129	Principles of Entrepreneurship			
A60194	Geotechnical Engineering Lab	-	3	2
A60086	Advanced Communication Skills Lab	-	3	2
<b>Total</b>		<b>23</b>	<b>8</b>	<b>28</b>

## IV YEAR I SEMESTER

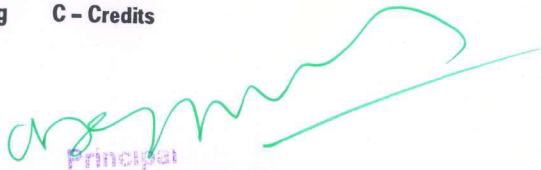
Code	Subject	L	T/P/D	C
A70140	Remote Sensing & GIS	4	-	4
A70143	Transportation Engineering -II	4	-	4
A70138	Estimating & Costing	4	-	4
A70133	Water Resources Engineering-II	4	-	4
	<b>Elective-II</b>	4	-	4
A70330	Finite Element Methods			
A70134	Advanced Foundation Engineering			
A70145	Watershed Management			
A70136	Air Pollution and Control			
	<b>Elective-III</b>	4	-	4
A70135	Advanced Structural Design			
A70137	Earth and Rock fill Dams and Slope Stability			
A70144	Water Resources Systems Analysis			
A70139	Industrial Waste Water Treatment			
A70195	Concrete & Highway Materials Lab	-	3	2
A70192	Environmental Engineering Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

## IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	<b>Elective-IV</b>	4	-	4
A80151	Rehabilitation and Retrofitting of Structures			
A80148	Geo-Environmental Engineering			
A80147	Design and Drawing of Irrigation Structures			
A80141	Solid Waste Management			
A80150	Prestressed Concrete Structures	4	-	4
A80146	Construction Management	4	-	4
A80087	Industry Oriented Mini project	-	-	2
A80089	Seminar	-	6	2
A80088	Project Work	-	15	10
A80090	Comprehensive viva	-	-	2
	<b>Total</b>	<b>12</b>	<b>21</b>	<b>28</b>

Note: All End Examinations (Theory and Practical) are of three hours duration.

T-Tutorial L - Theory P - Practical D-Drawing C - Credits

  
Principal  
Megha Inst. of Engg. & Tech for Women  
Edulabad, Ghatkesar (Mdi),  
Medchal Dist-501 301

**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**02**

**ELECTRICAL AND  
ELECTRONICS  
ENGINEERING**

**For**

**B.TECH. FOUR YEAR DEGREE COURSE**  
(Applicable for the batches admitted from 2013-14)  
(I - IV Years Syllabus)



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**KUKATPALLY, HYDERABAD - 500 085.**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD.****B. TECH. ELECTRICAL AND ELECTRONICS ENGINEERING****I YEAR**

Code	Subject	L	T/P/D	C
A10001	English	2	-	4
A10002	Mathematics – I	3	1	6
A10003	Mathematical Methods	3	-	6
A10004	Engineering Physics	3	-	6
A10005	Engineering Chemistry	3	-	6
A10501	Computer Programming	3	-	6
A10301	Engineering Drawing	2	3	6
A10581	Computer Programming Lab.	-	3	4
A10081	Engineering Physics / Engineering Chemistry Lab.	-	3	4
A10083	English Language Communication Skills Lab.	-	3	4
A10082	IT Workshop / Engineering Workshop	-	3	4
	<b>Total</b>	<b>19</b>	<b>16</b>	<b>56</b>

**II YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A30007	Mathematics – III	4	-	4
A30102	Fluid Mechanics and Hydraulic Machinery	4	-	4
A30404	Electronic Devices & Circuits	4	-	4
A30204	Electrical Circuits	4	-	4
A30403	Electromagnetic fields	4	-	4
A30206	Electrical Machines-I	4	-	4
A30181	Fluid Mechanics and Hydraulic Machinery Lab	-	3	2
A30482	Electronic devices & Circuit labs	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**II YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A40010	Managerial Economics & Financial Analysis	4	-	4
A40214	Power Systems-I	4	-	4
A40413	Electronic Circuits	4	-	4
A40407	Switching Theory and Logic Design	4	-	4
A40213	Network Theory	4	-	4
A40212	Electrical Machines-II	4	-	4
A40287	Electrical Machines lab -I	-	3	2
A40286	Electrical Circuits and Simulation Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A50423	IC Applications	4	-	4
A50014	Management Science	4	-	4
A50221	Power Systems-II	4	-	4
A50211	Control Systems	4	-	4
A50220	Power Electronics	4	-	4
A50218	Electrical Machines-III	4	-	4
A50289	Electrical Machines lab –II	-	3	2
A50086	Advanced Communication Skills Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A60223	Electrical and Electronics Instrumentation	4	-	4
A60225	Static Drives	4	-	4
A60222	Computer Methods in Power Systems	4	-	4
A60430	Microprocessors and Interfacing Devices	4	-	4
A60009	Environmental Studies	4	-	4
	<b>Open Elective</b>	4	-	4
A60117	Disaster Management			
A60017	Intellectual Property Rights			
A60018	Human Values and Professional Ethics			
A60290	Control Systems and Simulation Lab	-	3	2
A60291	Power Electronics and Simulation Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

## IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
A70231	Switch Gear and Protection	4	-	4
A70232	Utilization of Electrical Energy	4	-	4
A70421	Digital Signal Processing	4	-	4
A70230	Power System Operation and Control	4	-	4
	<b>Elective-I</b>	4	-	4
A70228	High Voltage Engineering			
A70432	VLSI Design			
A70435	Digital Control Systems			
	<b>Elective-II</b>	4	-	4
A70229	Optimization Techniques			
A70226	Electrical Distribution Systems			
A70227	Electrical Estimation and Costing			
A70498	Microprocessors and Interfacing Devices Lab	-	3	2
A70293	Electrical Measurements Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

## IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
A80237	Fundamentals of HVDC and FACTS Devices	4	-	4
	<b>Elective-III</b>	4	-	4
A80238	Neural Networks and Fuzzy Logic			
A80324	Renewable Energy Sources			
A80244	Principles of Reliability Engineering			
	<b>Elective-IV</b>	4	-	4
A80234	Advanced Control Systems			
A80235	EHV AC Transmission			
A82909	Nanotechnology			
A80087	Industry Oriented Mini Project	-	-	2
A80089	Seminar	-	6	2
A80088	Project Work	-	15	10
A80090	Comprehensive Viva-Voce	-	-	2
	<b>Total</b>	<b>12</b>	<b>21</b>	<b>28</b>

Note: All End Examinations (Theory and Practical) are of three hours duration.

T-Tutorial L – Theory P – Practical D-Drawing C – Credits

  
 Principal  
 Megha Inst. of Engg. & Tech for Women  
 Edulabad, Ghatkesar (Md),  
 Medchal Dist-501 301



**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**COMPUTER SCIENCE  
AND  
ENGINEERING**

**For**  
**B.TECH. FOUR YEAR DEGREE COURSE**  
(Applicable for the batches admitted from 2013-14)  
(I - IV Years Syllabus)



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**KUKATPALLY, HYDERABAD - 500 085.**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD.****B. TECH. COMPUTER SCIENCE AND ENGINEERING****I YEAR**

Code	Subject	L	T/P/D	C
A10001	English	2	-	4
A10002	Mathematics – I	3	1	6
A10003	Mathematical Methods	3	-	6
A10004	Engineering Physics	3	-	6
A10005	Engineering Chemistry	3	-	6
A10501	Computer Programming	3	-	6
A10301	Engineering Drawing	2	3	6
A10581	Computer Programming Lab.	-	3	4
A10081	Engineering Physics / Engineering Chemistry Lab.	-	3	4
A10083	English Language Communication Skills Lab.	-	3	4
A10082	IT Workshop / Engineering Workshop	-	3	4
	<b>Total</b>	<b>19</b>	<b>16</b>	<b>56</b>

**II YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A30008	Probability and Statistics	4	-	4
A30504	Mathematical Foundations of Computer Science	4	-	4
A30502	Data Structures	4	-	4
A30401	Digital Logic Design	4	-	4
A30404	Electronic Devices and Circuits	4	-	4
A30202	Basic Electrical Engineering	4	-	4
A30282	Electrical and Electronics Lab	-	3	2
A30582	Data Structures Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**II YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A40506	Computer Organization	4	-	4
A40507	Database Management Systems	4	-	4
A40503	Java Programming	4	-	4
A40009	Environmental studies	4	-	4
A40509	Formal Languages and Automata Theory	4	-	4
A40508	Design and Analysis of Algorithms	4	-	4
A40585	Java Programming Lab	-	3	2
A40584	Database Management Systems Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A50511	Principles of Programming Languages	4	-	4
	<b>OPEN ELECTIVE</b>	4	-	4
A50018	Human Values and Professional Ethics			
A50017	Intellectual Property Rights			
A50117	Disaster Management			
A50518	Software Engineering	4	-	4
A50514	Compiler Design	4	-	4
A50510	Operating Systems	4	-	4
A50515	Computer Networks	4	-	4
A50589	Operating Systems Lab	-	3	2
A50587	Compiler Design Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**III YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A60521	Distributed Systems	4	-	4
A60522	Information Security	4	-	4
A60524	Object Oriented Analysis and Design	4	-	4
A60525	Software Testing Methodologies	4	-	4
A60010	Managerial Economics and Financial Analysis	4	-	4
A60512	Web Technologies	4	-	4
A60591	Case Tools and Web Technologies Lab	-	3	2
A60086	Advanced Communication Skills Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

**IV YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A70511	Linux Programming	4	-	4
A70530	Design Patterns	4	-	4
A70520	Data Warehousing and Data Mining	4	-	4
A70519	Cloud Computing	4	-	4
<b>ELECTIVE - I</b>		4	-	4
A70540	Software Project Management			
A70532	Image processing and Pattern Recognition			
A70536	Mobile Computing			
A70529	Computer Graphics			
A70352	Operations Research			
<b>ELECTIVE - II</b>		4	-	4
A70534	Machine Learning			
A70539	Soft Computing			
A70533	Information Retrieval Systems			
A70526	Artificial Intelligence			
A70628	Computer Forensics			
A70596	Linux Programming Lab	-	3	2
A70595	Data Warehousing and Mining Lab	-	3	2
<b>Total</b>		<b>24</b>	<b>6</b>	<b>28</b>

**IV YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A80014	Management Science	4	-	4
<b>ELECTIVE III</b>		4	-	4
A80551	Web Services			
A80538	Semantic Web and Social Networks			
A80537	Scripting Languages			
A80547	Multimedia & Rich Internet Applications			
<b>ELECTIVE - IV</b>		4	-	4
A80542	Ad hoc and Sensor Networks			
A80550	Storage Area Networks			
A80543	Database Security			
A80439	Embedded Systems			
A80087	Industry Oriented Mini Project	-	-	2
A80089	Seminar	-	6	2
A80088	Project Work	-	15	10
A80090	Comprehensive Viva	-	-	2
<b>Total</b>		<b>12</b>	<b>21</b>	<b>28</b>

Note: All End Examinations (Theory and Practical) are of three hours duration.  
 T-Tutorial L - Theory P - Practical D-Drawing C - Credits

*Megha*  
 Principal  
 Megha Inst. of Engg. & Tech for V  
 Edulabad, Ghatkesar (Maj),  
 Medchal Dist-501 301



**BELLUS  
E-WASTE**

# 4-120, Ramchandrapuram, Shad Nagar Industrial Area, Shad Nagar, Ranga Reddy District.

**Mob: 9393764108**

**Email: globaltraders108@gmail.com**

From  
Bellus E-Waste,  
Ramchandrapuram,  
Shad Nagar Industrial Area,  
Ranga Reddy Dist.  
Ph : 9393764108

To  
MIETW,  
Edulabad (V), Ghatkesar (M),  
Medchal Dist, Telangana.  
Ph : 9985853306, 9246805889

The following E-Waste items are received from Megha Institute of Engineering and Technology for Women on Date :24/05/2022

Sl. No.	Item	Quantity	Each Weight	Total Weight	Rate	Tax	Sub Total
1	CPU	51	5 kg	255 kgs	25	-	6,375
2	Monitor	9	6 kg	54 kgs	25	-	1,350
3	SMPS, UPS, Key Board etc	31	3 kg	93 kgs	25		2,320
4	Mouse	20	100 g	2 kg	25		50
Total :							10,095

The amount of Rs.10,100/- (Rupees Ten Thousand One Hundred only) is transferred to MIETW Account No. 0742073000000011

 Manager

**BELLUS-E-WASTE**  
# 4-120, Ramchandrapuram,  
Mahadevpur, Kondurg Ma  
Ranga Reddy Dist-509 20  
**GSTIN: 36AASP0012D1ZS**



# MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN

(Affiliated to JNTUH & Approved by AICTE)

Sy. No. 7, Edulabad (V), Ghatkesar (M), Medchal Dist., Telangana State - 501 301.

Ref.

## INVOICE

From  
MIETW,  
Edulabad (V), Ghatkesar (M),  
Medchal Dist, Telangana.  
Ph : 9985853306

To  
Bellus E-Waste,  
Ramchandrapuram,  
Shad Nagar Industrial Area,  
Ranga Reddy Dist.  
Ph : 9393764108

Invoice No : \_\_\_\_\_

Due Date : 24/05/2022

Invoice Date : 24/05/2022

Sl. No.	Item	Quantity	Each Weight	Total Weight	Rate	Tax	Sub Total
1	CPU	51	5 kg	255 kgs	25	-	6,375
2	Monitor	9	6 kg	54 kgs	25	-	1,350
3	SMPS, UPS, Key Board etc	31	3 kg	93 kgs	25		2,320
4	Mouse	20	100 g	2 kg	25		50
Total :							10,095

Bank Details :-

Account No. 0742073000000011

For Megha Institute of Engineering & Technology for women


IFSC Code : SIBL0000742

Invoice Summary

Sub Total INR : Rs.10,100

GST (18%) INR : -----

Total : Rs.10,100

  
Principal

Principal  
Megha Inst. of Engg. & Tech for  
Edulabad, Ghatkesar (Md),  
Medchal Dist-501 301

**MEMORANDUM OF UNDERSTANDING**

This **Memorandum of Understanding** is made and executed on **20<sup>th</sup> April 2022** at **Hyderabad**.

BY AND BETWEEN

Megha Institute of Engineering and Technology for Women, Edulabad(V), Ghatkesar(M), Medchal(D), Telangana-501301. Herein after referred to as "Megha Institute of Engineering and Technology for Women" which is always mean and include unless it be repugnant to context or meaning thereof, its administrators, assigns and successors represented by Principal Megha Institute of Engineering and Technology for Women Dr. M. Venugopal who is duly authorized to sign and execute the MoU.

Being the First Part

AND

Earthbox Ventures Private Ltd, an authorized agency of ITC having its principal office situated at Plot No # 52, IDA Nacharam, Hyderabad 500094 and Represented by Mr. CH. Raju Managing Director hereinafter referred as "**Earthbox**"

Being the Second Part

Whereas Megha Institute of Engineering and Technology for Women has agreed to collect and give away the dry recyclable waste including any kind of Paper waste and E-Waste generated in its college and form Swatch WOW Hyderabad Chapter.

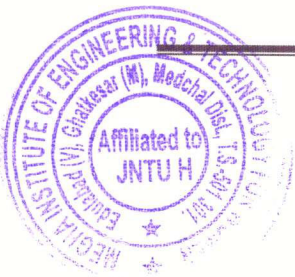
**1. NOW THIS MOU WITNESSETH AS UNDER:**

This is an agreement for a synergic alliance between Megha Institute of Engineering and Technology for Women and Earthbox for the social cause of recycling of Dry Waste and Environment Protection through recycling.

**Time period:** This MOU shall be for a period of three years commencing from the date of signing of this MOU.

**2. Roles and Responsibilities of Megha Institute of Engineering and Technology for Women:**

- a. To ensure source segregation of dry and wet waste at College premise through its Teaching staff, housekeeping staff and Students.



- b. Megha Institute of Engineering and Technology for Women will give away any kind of paper waste, dry recyclable waste and old records to Earthbox at price agreed mutually. Megha Institute of Engineering and Technology for Women shall form Swachh WOW Hyderabad Chapter in the college with Student Volunteers and adopt nearby Schools or Colonies to promote Source Segregation through student volunteers.
- c. Megha Institute of Engineering and Technology for Women shall provide students for Internship in WOW Program.
- d. Megha Institute of Engineering and Technology for Women shall motivate students to bring dry recyclables like paper, plastic, metal etc. from their home and donate to WOW initiative.

**3. Roles and Responsibilities of Earthbox:**

- a. ITC-MARI will train the students and housekeeping staff on source segregation and through them inculcate the habit of source segregation among the other students.
- b. Earthbox will collect dry recyclable waste and old records from College and bring to the Dry Resource Collection Centre (DRCC) without any spillage.
- c. Earthbox will organize sorting of the dry waste into different categories, baling, and appropriate disposal of dry waste.
- d. Earthbox will make payment to Megha Institute of Engineering and Technology for Women directly into their accounts for the dry recyclable waste collected against the accurate weighment and the type or category of the dry waste. The payment shall be made no later than 15 days from the date of purchase of dry waste from the waste collector. Franchisee on the request of Megha Institute of Engineering and Technology for Women may give New Notebooks and Stationery against the value of dry recyclable waste lifted.

**4. Performance of Obligations**

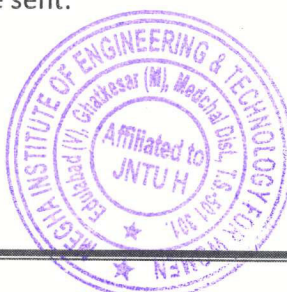
- a. The details laid out in this MOU, notwithstanding the essence and spirit of this MOU is an understanding between Megha Institute of Engineering and Technology for Women and Earthbox.
- b. Any notice or other communication under or in connection with this agreement will be in writing in the English language and will be delivered personally or sent by way of e-mail to the party due to receive the notice or communication at its address set out in this contract or such other address as either party may specify by notice in writing to other.

**ADDRESS FOR COMMUNICATION:**

Following are the address to which all notices shall be sent:

**For Earthbox:**

Earthbox Ventures Private Ltd,  
Plot No#52, IDA Nacharam,  
Hyderabad - 500076  
Phone No. 9391629462





Email ID:www.earthboxventures.com

**For Megha Institute of Engineering and Technology for Women**

Megha Institute of Engineering and Technology for Women

Edulabad(V),Ghatkesar(M),Medchal(D), Telangana-501301

Mobile No.9676038540

Email id: [megha.inst@meghaengg.ac.in](mailto:megha.inst@meghaengg.ac.in).

**5. Execution of this Agreement will be deemed to be**

- a) A confirmation by both the parties that no benefit, either in cash or kind has been provided by either party to the other party or to any officer or employee, or any relative/ associate of any officer or employee of either party or of any of their associate institutions/companies in order to enter into this Agreement, and
- b) An undertaking by both the parties not to provide any benefit, either in cash or kind to any officer/employee/relative/associate of any officer or employee of either party as reward or consideration either for entering into this MOU or other matter relating to this Agreement.

**Force Majeure:** Neither party will be liable for damages for any delay or failure to perform its obligations here under, if such delay or failure is due to reasons beyond the control of the concerned party including without limitation, strikes, riots, wars, fires, epidemics, quarantine restrictions, unusually severe weather, earth quakes, explosions, acts of God or state or any public enemy or acts mandated by applicable laws, regulation or order, whether valid or invalid, of any Governmental body.

- 8. Dispute Resolution:** It is understood by both the parties that this Agreement is for a social cause and not to make any profit out of the understanding. The Parties covenant that they will comply with all applicable laws and regulations in their conduct pursuant to this Agreement. Any dispute arising out of this Agreement shall be first attempted to settle amicably between the parties.

**9. Arbitration**

Any dispute which is not resolved amicably shall be finally settled by binding arbitration in respect to the matters concerning to the MOU with the Sole Arbitrator to be appointed by the mutual consent of both the parties. The Parties agree that the decision or award resulting from arbitration shall be final and binding upon the Parties.

Pending the submission of and/or decision on a dispute, the Parties shall continue to perform their respective obligations under this Agreement without prejudice to a final adjustment in accordance with such arbitration award



Registered Office: Plot#52, IDA Nacharam, Hyderabad – 500 076  
[www.earthboxventures.com](http://www.earthboxventures.com); [sales@earthboxventures.com](mailto:sales@earthboxventures.com);  
CIN:U74999TG2016PTC112088; GSTIN:36AAECE4086D2ZQ



**10. Governing and Jurisdiction:**

This Agreement is subjected to the Jurisdiction of Courts at Hyderabad.

Both the parties will agree that it will not make use of, disseminate, or in any way disclose any confidential information to any person, firm or business. Furthermore, the existence of any discussions, negotiations or agreements in progress between the parties will not be released to any form of public media without written approval of both parties.

**11. Amendments**

This Agreement and the Schedules together constitute a complete and exclusive understanding of the terms of the Agreement between the Parties on the subject hereof and no amendment or modification hereto will be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

**12. NOTICE /Termination**

Any notice required to be given hereunder shall be given in writing at the address of each party set forth as below in this agreement or to such other address either party may substitute by written notice to the other. Either party may terminate this Agreement by giving 30 days written notice to the other party.

In witness whereof the parties hereto have signed this agreement on the day, month and year mentioned hereinbefore.

For Megha Institute of Engineering and Technology for Women and For Earthbox

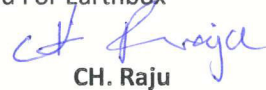


**Dr.M.Venugopal**

**Principal**

Edulabad(V),Ghatkesar(M),Medchal (D)

Telangana- 501301



**CH. Raju**


**Managing Director**

Earthbox Ventures Private Ltd


Plot No#52,IDA Nacharam,Secunderabad

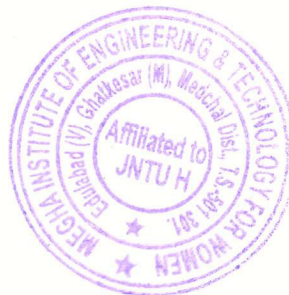
Telangana -500094

Witness:

1.  (ITC-NOW)

2.

  
**B.SAI VENKATA KRISHNA**  
MIETW.



**MEMORANDUM OF UNDERSTANDING**

This Memorandum of Understanding is between:

**Datapoint Info Solutions**

Flat No101,Sri Sai Rams Swarnalatha Estates, Sai Saradhi Nagar, Hyderabad-500016 (T.S).

(Hereafter called **The Company**)

And

**Megha Institute Of Engineering And Technology For Women**

Sy. No. 7, Edulabad Road, Edulabad, Ghatkesar, Telangana 501301.

(Hereafter called **The College**)

(A) This Memorandum of Understanding will enable:

Students of the **Megha Institute Of Engineering And Technology For Women** to have the Opportunity to undertake work experience / industry training / industry Practices etc at the above Company.

(B) This agreement is executed on this 12/04/2022.

(C) The agreement shall commence from \_\_\_\_\_, and shall be in force till the Completion of the Program.

(D) The appendix to the Memorandum of Understanding is attached.

Signed:

For Datapoint Info Solutions

For Megha Institute Of Engineering And Technology For Women

  
Suresh Maguluri

CEO



Principal

**APPENDIX 1: Schedule of Responsibilities**

**A) The Company agrees to be responsible for:**

1. Initially the company engages the students in '**Major Projects**' that help the students to gain insight into practical aspects of the Markets and Industry, and also helps the students in improving their technical aspects.
2. Assigning projects to students and providing the **Training & Development of Projects** to the **B.Tech CSE** students provided by the College on Various Technologies at a fee of **Rs - \_\_\_\_\_/-per student for Major Projects.**
3. The company provides all the above facilities for the tenure of \_\_\_\_\_ to complete **Training and Project Work.**

**B) The College agrees to be responsible for:**

1. Providing \_\_\_\_\_ students from **B.Tech CSE** to the Company for the **Major Project Training Program.**
2. Providing the necessary infrastructure & Facilities to **the Company at the College** premises.

For Datapoint Info Solutions

  
Suresh Maguluri  
CEO



For Megha Institute Of Engineering And Technology For Women

Principal



ISO 9001:2015

## NATIONAL ACADEMY OF CONSTRUCTION

(A Society of State Government of Telangana)  
NAC Campus, Kothaguda (Post), Cyberabad, Hyderabad-84  
Ph: 040-23111916 & 17 Fax:23111997, e-mail: [info@nac.edu.in](mailto:info@nac.edu.in)

&



## MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN

(Approved by AICTE & Affiliated to JNTUH)  
Edulabad (V),Ghatkesar(M),Medchal (D),Telangana -501301 , Email: [megha.inst@meghaengg.ac.in](mailto:megha.inst@meghaengg.ac.in)

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**Lr.No.NAC/Dir (PGC)/MOU/2022-23/004/ Date:12.04.2022**

### Memorandum of Understanding (MOU)

This memorandum of Understanding executed on the day 12<sup>th</sup> of April, 2022 between: **National Academy of Construction** having its head office at NAC Campus, Kothaguda (Post), Cyberabad, Hyderabad-84, here after called as **NAC**.

**AND**

M/s.Megha Institute of Engineering and Technology for Women, located at Ghatkesar, Hyderabad, Telangana State which is affiliated to JNTU, Hyderabad, Approved by AICTE, New Delhi, here after called as **MIETW**.

The parties wish to collaborate with each other for providing outsourcing services on conducting Seminars, Workshops, Field Visits, Conferences, Certificate Programme, Finishing School Programme, Training, Placement & Higher Education opportunities to the students, Faculty Development Programs for Faculty for a period of 2 years from the date of signing of this MOU and further extendable.

The Parties here-by agree to the following criterion:-

- NAC will be providing training to Civil Engineering Students of MIETW in the areas of latest technologies that are practiced in the industry with in the activities related to NAC.
- NAC will be providing training to Civil Engineering Students of MIETW based on newly introduced Civil training programmes.
- All the training sessions will be held at NAC only.
- All the above proposals of training shall be informed to NAC in advance, minimum 30 days and subjected to availability of NAC Resources, the submitted approvals will be accepted and informed to MIETW.
- MIETW shall send minimum of Four faculty members for FDP organized by NAC.
- All the training programmes conducted by NAC at NAC campus, Hyderabad are self financed programmes by the individuals or by the institution or through sponsorship.

Contd....2.

**Student Chapter:**

Further it is mutually agreed that NAC to open a student chapter and the following faculties & students members are nominated by M/s. Megha Institute of Engineering and Technology for Women.

**MENTORS:**

1. Mrs. M. Priyanka, Asst Prof- 9573159282
2. Mr. D. Raja Sekhar Reddy, Asst Prof -9966158432



**STUDENT CONVENORS:**

- Ms. V. Ankitha - IV Year-9949853770  
Ms. S. Anusha - III Year-6300592866  
Ms. P. Deepika - II Year- 6305416450

IN WITNESS WHERE OF, the parties have executed the Memorandum of Understanding by their authorized representatives in the presence of the following witnesses out of their free will and consent without any coercion or undue influence on 12<sup>th</sup> of April, 2022.


**Signed for on behalf of NAC through its Authorized Representatives:**

Name: K. Radha Krishna  
Designation: Director, PG Center, NAC

Signature.....   
**Director  
PG, NAC  
Hyderabad**  


**WITNESSES:**

In the presence of Ch. Ravi Kumar,  
Sr. Consultant, PG Center

Signature..... 

**Signed for on behalf of "Megha Institute of Engineering and Technology for Women" through its Authorized Representative:**

Name: Dr. M. Venugopal  
Designation: Principal, MIETW

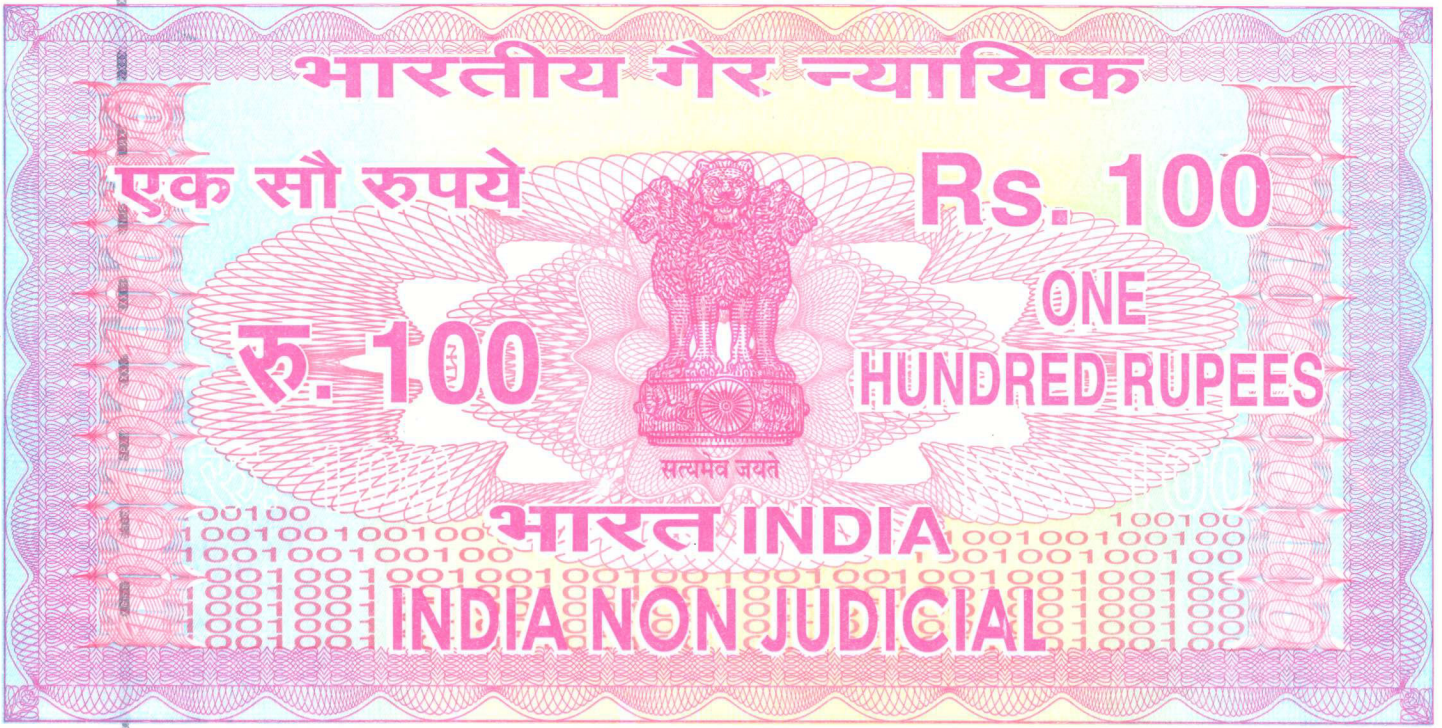
Signature.....   
**Principal**  
**Megha Inst. of Engg. & Tech. for Women**  
Edulabad (V), Ghatkesar (M),  
Medchal Dist, T.S-501 301

**WITNESSES:**

In the presence of Mr. B. Sai Venkata Krishna,  
Vice Principal, MIETW

Signature.....   


Signed and delivered on 12<sup>th</sup> April, 2022.



తెలంగాణ తెలంగాణ TELANGANA

SI No... 0464, Dt... 11/04/2022, Rs... 100/-

Sold To... N. Mohan Reddy (to M. Anjireddy)

For Whom... Megha Institute of Engineering and Technology for women

AN 153316

B SUSHEEL KUMAR VARMA  
REGISTERED STAMPVENDOR LIC NO 16-02-18/201  
RL NO 16-02-065/2020  
NO 2-2-1105/C/1 Tilak Nagar, Hyd - 044.

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is between:

**Datapoint Info Solutions**

Flat No101, Sri Sai Rams Swarnalatha Estates, Sai Saradhi Nagar, Yousufguda, Hyderabad-73.

(Hereafter called **The Company**)

And

**Megha Institute Of Engineering And Technology For Women**

Sy. No. 7, Edulabad(V), Ghatkesar(M), Medchal(D), Telangana State -501301

(Hereafter called **The College**)

(A) This Memorandum of Understanding will enable:  
Students of the **Megha Institute Of Engineering And Technology For Women**  
to have the Opportunity to undertake workshops / industry training / industry Practices/  
Internship Opportunities etc from the above Company.

(B) This MOU will enable for 3 years from the date of commencement.

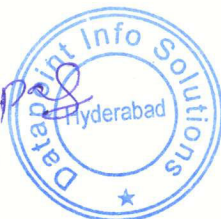
(C) This agreement is executed on this **12<sup>th</sup> of April 2022** .

Signed:

For Datapoint Info Solutions

For Megha Institute Of Engineering And Technology For Women

D. Venugopal  
HR Manager



Dr.M. Venugopal  
Principal  
Megha Inst. of Engg. & Tech. for Women  
Edulabad (V), Ghatkesar (M),  
Medchal Dist, T.S-501 301.

(D) The agreement shall commence from **12<sup>th</sup> April 2022** and shall be in force till 3 years of the Program.

(E) The Appendix to the Memorandum of Understanding is attached.

### **APPENDIX : Schedule of Responsibilities**

#### **A) The Company agrees to responsible for:**

1. Initially the company engages the students in '**Industry Oriented Program**' that help the students to gain insight into practical aspects of the Markets and Industry, and also helps the students in improving their technical aspects.
2. We will provide **Internships** for B.Tech students on Java, Python and other emerging technologies.
3. **Workshops** for B.Tech students on various trending technologies:  
Workshop on Emerging trendz in IT Industry  
Workshop on Python
4. We will provid FDP Programs on trending Technologies.

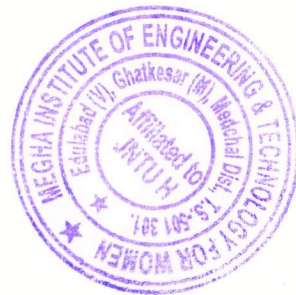
#### **B) The College agrees to be responsible for:**

1. Providing students from **B.Tech** to the Company for the **Programs**.
2. Providing the necessary infrastructure & Facilities to the company at the college premises.

For Datapoint Info Solutions

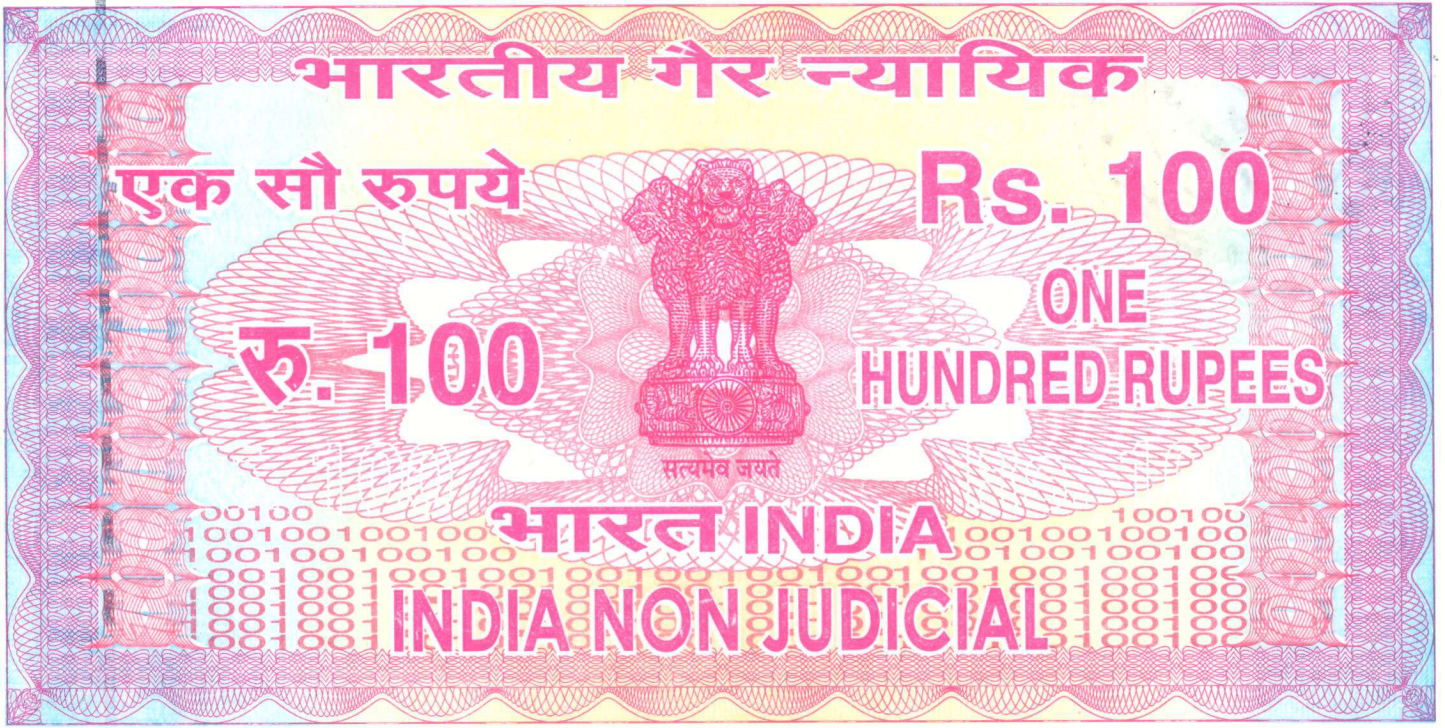
For Megha Institute Of Engineering And Technology For Women

D. Varu  
HR Manager



  
Dr.M. Venugopal  
Principal  
Megha Inst. of Enng. & Tech. for Women  
Edulabad (V), Ghatkesar (M),  
Medchal Dist, T.S-501 301.





తెలంగాణ తెలంగాణ TELANGANA

AM 809877

Sl.No. 17963 DT:27-12-2021 100/-

Sold to Nagam mohan Reddy

S/o.W/o. D/o. (M) Anji Reddy

For Whom Megha institute of engineering & Technology For women

A. Rajesh Kumar

A. RAJESH KUMAR

LICENSED STAMP VENDOR

L. No.15-17-018/2011. R.L.No.15-17-061/2020

H.No.7-121, Beside Sub-Registrar Office

Ghatkesar (V & M) M. M. Dist 501-301

Cell: 9393366050, 9392134425

### Memorandum of Understanding

This Memorandum of Understanding is made at **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** on Tuesday of 28<sup>th</sup> December, 2021.

BETWEEN

**Conscience Technologies** is a fast growing technology solution and service provider established in 2010. Conscience Technologies has highly skilled and dedicated IT Professionals to provide customized IT Solutions for several industries using 10 Years of Technical Experience having its Corporate office at #17-83/2c, 3<sup>rd</sup> floor, Annapurna Function hall lane, Dilsukh Nagar, Hyderabad-500060, hereinafter referred to as "CT" (which term shall so far as the context admits be deemed to mean and include its successors, administrators, executors and Trainees) of the **First Part**.

AND

**MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** located at **Survey No.7, Edulabad(v), Ghatkesar(M), Medchal(D), Telangana-501301** hereinafter referred to as "**MIETW**" (Which term shall so far as the context admits be deemed to mean and include its successors and assigns) of the **Second Part**,

**WHEREAS:**

1. CT is a Training Partner associated with various Colleges for providing training to the students as part of their project development and training activity.
2. **MIETW** College is an Educational institution affiliated to **JNTU** University. The College offers Under Graduate program in **ECE, EEE** Stream.
3. **MIETW** College is willing to enter into a Memorandum of Understanding (MOU) with **CT** for the skills enhancement initiative through project development and training, the technology platform and other face to face initiatives.

**NOW IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO AS UNDER:**

**1. Objective:**

The objective of this MOU is to enable students of **MIETW** College access resources that would enhance their employability.

**2. Period of MOU:**

This MOU shall come into force and effect from the date of execution and shall remain valid for a period of **Three (03)** year from such date after which the same may be reviewed by either party. However, if the same is not renewed this arrangement will be deemed terminated on the expiry of the said duration period.

**3. Roles & Responsibilities of the CT:**

1. CT shall provide services to **MIETW** like Internships opportunities, Providing Assistance to Project work, Arranging Guest Lectures, Enhancing the Technical skills

of the students, Arranging Industrial visits, Conduct of Faculty Development Program(FDP) etc.

2. Two engineers from M/s Conscience Technologies will be available for guiding the students at any instant of time whenever event is carried out at MIETW.
3. The event schedule prepared by coordinators of the department and Director M/s Conscience Technologies shall be strictly followed.
4. Class rooms and labs with necessary teaching aids shall be provided by the college during the event.
5. The agreement shall hold good for the academic year 2021.
6. CT will arrange for assessment of its own and also arrange external assessment as required.

#### **4. Roles & Responsibilities of MIETW:**

MIETW shall provide necessary infrastructure to CT for conduct of any event as scheduled by CT on confirmation.

MIETW shall adhere to the terms and conditions as laid by CT.

MIETW shall ensure that minimum numbers of participants are arranged for any event scheduled.

MIETW shall agree to pay if any financial implications are involved in conducting the event discussing upon both parties.

#### **5. Other Terms & Conditions:**

Following are the other terms and conditions of MOU:

- a. The students enrolled should complete the task as scheduled.
- b. The students should be regular and support CT Trainers.
- c. Event Coordinator to be appointed by college
- d. Event Coordinator's/Guide's active support and participation is required for smooth & efficient conduct of the event
- e. The College shall not write/publish any material or use any logos/names of CT in any of the publications without prior written consent and approval from CT.
- f.

**6. Certification:**

Certificates shall be awarded by CT to the students on successful completion of the program/Event.

**7. Limitations and Warranties :**

Both parties agree that it would be their endeavour to prevent any liability arising out of default or non-compliance of the MOU terms by the other party.

**8. Termination:**

- a. Both parties can terminate the MOU with a prior written thirty (30) day notice on default of terms of non-adherence to any condition or responsibilities by the other party as outlined in this MOU in case such default is not rectified within such 30 days.
- b. Both parties also agree that it would be their professional endeavour that despite any termination of the MOU, progress would continue, which would be without any hindrance and would be progressed for completion.

**9. Entirety & Amendment:**

This MOU contains the entire understanding between the Parties in relation to the activities stated above. If during the operation of the MOU, circumstances may arise which call for alteration / modification to this MOU, such alteration / modification shall be mutually discussed and agreed upon in writing. Such changes will be formalized in writing as an 'Addendum' to this MOU. Any changes/amendments to this MOU not in conformance to this section shall be deemed to be void-ab-initio.

**10. Intellectual Proprietary Rights:**

All intellectual or proprietary property and information, supplied or developed by either Party shall be and remain the sole and exclusive property of the Party who supplied or developed same. Upon termination of this MOU and upon written request,

the Party in receipt of the requesting Party's intellectual or proprietary property and/or information pursuant to this MOU shall return such information to the requesting Party.

#### **11. Confidential Information:**

- a. Both parties undertake to each other to keep confidential all information (written or oral) concerning the business and affairs of the other, which has been obtained or received during the course(s) of performance hereunder, save that which is inconsequential or obvious;
- b. Already in its possession other than as a result of a breach of this clause; or in the hands of the public other than as a result of a breach of this clause.
- c. In the event of any of the parties becoming legally compelled to disclose any confidential information, such party shall give sufficient notice to the other party so as to enable the other party to seek a timely protective order or any other appropriate relief. If such an order or other relief cannot be obtained, the party being required to make such a disclosure shall make the disclosure of the Confidential Information only to the extent that is legally required of it and no further.
- d. Both parties agree not to deal directly or enter into any business agreement with any of the partners or associates or customers of either party during the term of the agreement and also after the agreement have been terminated, not earlier than two years from the date of termination.

#### **12. Force Majeure:**

- a. Neither party to this MOU shall be liable for any failure or delay on its part in performing any of its obligations under this MOU, if such failure or delay shall be result of or arising out of Force Majeure conditions and, provided that the party claiming Force Majeure shall use its best efforts to avoid or remove such cause of

non-performance and shall fulfil and continue performance hereunder with the utmost dispatch whenever and to the extent such cause or causes are removed.

- b. Any extraordinary event, which cannot be controlled by the parties, shall for the purpose of this MOU be considered as a Force Majeure event. Such events include acts of God, acts or omissions of any Government or agency thereof, compliance with rules, regulations or order of any Government Authority. Provided however, if either party claims that existence of any of the aforesaid conditions is delaying or disabling the performance by said party of its obligations under this MOU, such party shall give immediate notice to the other party of the existence of such conditions whose existence are claimed to delay or disable the performance of obligations as aforesaid.

**IN WITNESS WHEREOF**, the Parties hereto have duly executed this Agreement as on the day, month and year first hereinabove written

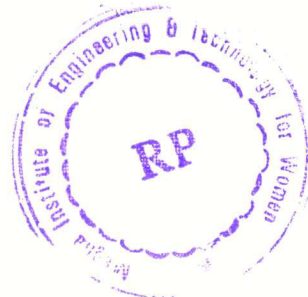
**For Conscience Technologies**

**(Authorized Signatory)**  
**Name: B.V.Krishna Reddy**  
**Designation: Managing Director**  
**Place: Hyderabad**  
**Date: 28-12-2021**  
**Stamp:**



**For MIETW College**

**(Authorized Signatory)**  
**Name: Dr.M.Venugopal**  
**Designation: Principal**  
**Place: Hyderabad**  
**Date: 28-12-2021**  
**Stamp:**



## Product License Agreement

THIS AGREEMENT is made and executed on this 9th day of November 2021, BETWEEN:

- (1) M/s Coherendz India Private Limited, a company registered under the provisions of the Companies Act, 1956, with its registered office at H. No. 2-17-76/3/1, Raghavendra Nagar, Kalyanpuri, Uppal, Hyderabad, India 500 039 and its Corporate office at #01, Catalyst (T-Hub), IIIT Hyderabad Campus, Gachibowli, Hyderabad, India - 500 032 (hereinafter referred to as "Coherendz or Licensor", which term shall, unless repugnant to the context or meaning thereof, mean and include its successors and permitted assigns) of the ONE PART;

AND

- (2) Megha Institute of Engineering and Technology for Women with its office in Survey No.7, Edulabad(V) Ghatkesar(M) Medchal (Dist) Telangana 501301 (here in after referred to as "Institution or Alumni Association or Licensee"), which expression shall unless it be repugnant to the context or meaning hereof shall be deemed to mean and include the partners / its successors / The trustees from time to time of the trust, administrators, beneficiaries and the survivor or survivors of them, executors, legal representatives and permitted assigns (as the case may be) of the OTHER PART

This Agreement governs your acquisition and use of services of COHERENDZ for the Alumni Networking Solution – "Vaave" and subject to the terms conditions and realm of the various provisions contained hereinbelow:

1. Coherendz will build and deploy the Alumni Networking Website for alumni of Megha Institute of Engineering and Technology for Women. The application will be offered as a service and will be deployed on servers managed by Coherendz.
2. Coherendz shall be responsible for the backups, security, and management of the servers.
3. Coherendz shall maintain appropriate administrative, physical, and technical safeguards for protection of the security, confidentiality and integrity of the Institution's Data. It will NOT (a) modify Data, (b) disclose Data except as compelled by law OR as expressly permitted by the Institution OR authorized by the Institution to access any Third-Party Applications (c) access Data except to provide the Services and prevent or address service or technical problems, or at the Institution's request in connection with customer support matters.
4. The Institution shall not
  - a. Make the Services available to anyone other than its alumni, staff and students.
  - b. Sell, resell, rent or lease the Services granted by virtue of this agreement.
  - c. Use the Services to store or transmit infringing, libelous, or otherwise unlawful or tortuous material, or to store or transmit material in violation of third-party privacy rights.
  - d. Use the Services to store or transmit Malicious Code.
5. The cost and payment terms for the service offered is as per the payment terms mentioned in the Appendix.



**Coherendz India Private Limited**

#01, Catalyst (T-Hub), IIIT Hyderabad Campus, Gachibowli, Hyderabad, India - 500 032  
M: +91 9666 131 555



6. Unless otherwise stated, the fees do not include any taxes, levies, charges, duties or similar governmental assessments of any nature, including but not limited to value-added, sales, use or withholding taxes, assessable by any local, state, provincial, federal or foreign jurisdiction.
7. The payments once made are non-refundable, except for clauses mentioned in this agreement.
8. The services purchased cannot be decreased during the relevant subscription term stated in the Appendix.
9. Subject to the limited rights expressly granted hereunder, Coherendz reserves all rights, title and interest in and to the services, including all related intellectual property rights. No rights are granted to the Institution hereunder other than as expressly set forth herein.
10. Subject to the limited rights granted by the Institution authorizing Coherendz to use their data, to provide services, Coherendz acquires no right, title or interest from the Institution under this Agreement in or to Institution's Data, including any intellectual property rights therein.
11. Subject to the limited rights granted by a user to use the services, or user authorizing the Institution to access his information to become a member and use the services, Coherendz acquires no right, title or interest under this agreement to User Data, Including intellectual property therein. User usage of services is governed by End User License Agreement (EULA) and Privacy Policy mentioned at the time of user registration. The Institution has the complete rights on the User Data.
12. Coherendz shall have a royalty-free, worldwide, irrevocable, perpetual license to use and incorporate into the services any suggestions, enhancement requests, recommendations or other feedback provided by the Institution, including Users, relating to the operation of the services. Coherendz also reserves the right to add / modify / discard any of the features that it feels appropriate based on the research and feedback and may not implement all the features suggested by the institutions.
13. Both Coherendz and the Institution shall maintain the confidentiality of all the information, that is designated as confidential, whether orally or in writing, or that reasonably should be understood to be confidential given the nature of the information and the circumstances of disclosure.
14. This Agreement commences on the date accepted and continues until all User subscriptions granted in accordance with this Agreement have expired or been terminated.
15. In case of any disruption of services, for causes including by not limited to, hacking attempts on the server, insertion of malicious codes, server disruptions, server downtimes, etc., Coherendz shall ensure that the services are restored as soon as possible and shall communicate the same to the institution. In any such cases, liability of Coherendz shall restrict only to restoration of services and data from last scheduled backup. The general uptime will be around 99.8% on a month-on-month basis.
16. Either parties may terminate this Agreement for a cause: (i) upon 30 days written notice to the other party of a material breach if such breach remains unresolved at the expiration of such period, or (ii) if the other party becomes the subject of a petition in bankruptcy or any other proceeding relating to insolvency, receivership, liquidation or assignment for the benefit of creditors or (iii) the Institution's account become overdue, in that event no notice is required for termination of this agreement (iv) No information is received from the institution in two months from the date of signing of agreements. In such cases, it is transferred to Sales team to re-initiate the discussions.
17. In no event shall any termination relieve the Institution of the obligation to pay any fees payable to Coherendz for the period prior to the effective date of termination.




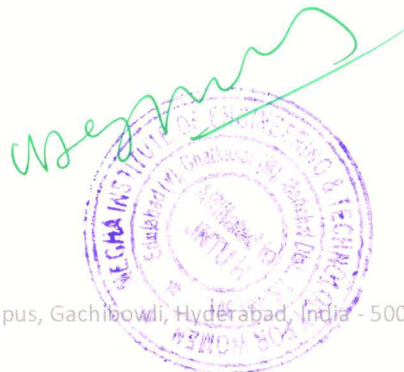
**Coherendz India Private Limited**

#01, Catalyst (T-Hub), IIIT Hyderabad Campus, Gachibowli, Hyderabad, India - 500092  
M: +91 9666 131 555





18. Upon any termination for cause by the Institution, Coherendz's liability shall be limited to allow the Institution to download their member data, in comma separated values (.csv) format long with attachments in their native format. Refund of fees, if agreed in the Order Form, shall be only valid, if terminated before the date as mentioned in the order form. Coherendz shall be responsible to meet all such obligations within 3 months of from the date of termination notice. Coherendz shall have no obligation to maintain or provide any of the Data and shall thereafter, unless legally prohibited, delete all of the Data in its systems or otherwise in its possession or under its control.
19. Each party agrees to the applicable governing law above without regard to choice or conflicts of law rules, and to the exclusive jurisdiction of the Courts of Hyderabad India and not any other court anywhere in India. However, both the parties hereby specifically agree to resolve their dispute or disputes if any by appointing the arbitrator or trained mediator mutually consented before approaching any court or quasi-judicial authority.
20. Force Majeure: A party is not liable for failure to perform the party's obligations if such failure is as a result of Acts of God (including fire, flood, earthquake, storm, hurricane or other natural disaster), war, invasion, act of foreign enemies, hostilities (regardless of whether war is declared), civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, terrorist activities, nationalization, government sanction, blockage, embargo, labor dispute, strike, lockout or interruption or failure of electricity or telephone service. No party is entitled to terminate this Agreement in such circumstances.
21. If a party asserts Force Majeure as an excuse for failure to perform the party's obligation, then the nonperforming party must prove that the party took reasonable steps to minimize delay or damages caused by foreseeable events, that the party substantially fulfilled all non-excused obligations, and that the other party was timely notified of the likelihood or actual occurrence of an event described in Clause 20 (Force Majeure).
22. This agreement is valid until either of the parties chooses to terminate it. The agreement will be renewed automatically every year with the payment of the fee for that corresponding year.



**Coherendz India Private Limited**

#01, Catalyst (T-Hub), IIT Hyderabad Campus, Gachibowli, Hyderabad, India - 500 032  
M: +91 9666 131 555

## Appendix: Subscription Plan

One Time Setup Cost	<del>INR 10,000</del> 100% waived off	Portal Setup and configuration
Annual Subscription Charges (ASC) from 1 <sup>st</sup> Year	INR 20,000	<ul style="list-style-type: none"> <li>• Support and Backups</li> <li>• Product upgrades</li> <li>• Domain, Hosting &amp; Bandwidth</li> </ul>
Plan	Start	
Payment Gateway Service Charges (Only If Applicable)	2.25% (All Indian Payment options and international payments disabled) 3% (All Indian Payments + International & Amex cards)	
Career Center (worth INR 50,000)	No	Premium Student-Alumni Mentorship Module

Taxes extra as applicable. The service is offered as Free Trial on 'Start' plan for a duration of 90 days from the date of signing of agreements. Annual Subscription Charges for every year is computed from the date of end of Free Trial. One time Setup Charges are completely waived off. The Annual Subscription Charges (ASC) for the first year shall be paid at the end of Free Trial.. Coherenz has no obligation to maintain institution's data if the institution doesn't continue subscription at the end of Free Trial and reserves the right to terminate the services at the end of Free Trial.

The subscription charges will be revised at the end of every 3 years (not exceeding 25%). The network will be hosted on an exclusive domain name chosen and provided by the institution.

IN WITNESS WHEREOF the LICENSOR and the LICENSEE here in above named have here to set their respective hands and signed this AGREEMENT in presence of the attesting witnesses signing as such on the day first above written.

1. Signed & sealed and executed for  
and on behalf of Coherenz India Private Limited



Location: Hyderabad, India

2. Signed & sealed and executed for  
and on behalf of Megha Institute of Engineering and Technology for Women



Location: Hyderabad, India



**Coherenz India Private Limited**

#01, Catalyst (T-Hub), IIIT Hyderabad Campus, Gachibowli, Hyderabad, India - 500 032  
M: +91 9666 131 555



**BELLUS  
E-WASTE**

# 4-120, Ramchandrapuram, Shad Nagar Industrial Area, Shad Nagar, Ranga Reddy District.

Mob: 9393764108

Email: globaltraders108@gmail.com

**Agreement for Sale and Disposal of E waste**

This Agreement for sale and disposal of e-waste (hereinafter referred to as the "Agreement") is made at Hyderabad on **07<sup>th</sup> February, 2020**.

**BETWEEN**

**Megha Institute of Engineering and Technology for Women**, affiliated to JNTUH, situated at Survey No.7, Edulabad(v), Ghatkesar(M), Medchal(D), Telangana State ,India (hereinafter referred as "**College**" which expression shall, unless repugnant to the context or meaning thereof, be deemed to include their successors, legal representatives and permitted assigns) of the One Part;

**AND**

**Bellus E Waste**, a authorized Dismantling Unit for collection, dismantling and storage of E-Waste(Under Rule 13(3)(II) of E-Waste(Management) Rules,2016, and having its registered office at Survey No.4-120,Ramachandrapuram Village, Mahadevpur, Kondurg Mandal, Ranga Reddy Dist, Telangana, India(hereinafter referred to as "**Bellus E Waste**" which expression shall unless repugnant to the context and meaning thereof mean and include its successors and permitted assigns) of the Other Part;

The College and BELLUS E WASTE shall be individually and collectively referred as "**Party**" and "**Parties**" respectively.

**WHEREAS –**

1. The College is engaged in the business of providing education and related services to its stake holders. While carrying out business activities e-wastes such as hard disks, printers, keyboards, mouse, phones etc., are accumulated (hereinafter referred to as "**e waste**") as well as would conduct drives through its students to collect e-waste and the College



**BELLUS-E-WASTE**  
# 4-120, Ramchandrapuram Village,  
Mahadevpur, Kondurg Mandal,  
Ranga Reddy Dist-509 207.  
GSTIN: 36AASF80812D1ZS



**BELLUS  
E-WASTE**

# 4-120, Ramchandrapuram, Shad Nagar Industrial Area, Shad Nagar, Ranga Reddy District.

**Mob: 9393764108**

**Email: globaltraders108@gmail.com**

intends to dispose of the said e waste generated as per guidelines of the Telangana State Pollution Control Board, Govt of Telangana.

2. BELLUS E WASTE has represented that it is a authorized e-waste disposal agency by and is operating a facility for the collections, dismantling, Storage and have sufficient infrastructure, manpower, skills and facilities to dispose of the said e waste without harming the environment in the manner prescribed by the concerned authorities.
3. Upon the representations of BELLUS E WASTE, the College is appointing BELLUS E WASTE to collect, remove and dispose the e waste generated by the College without harming the environment.
4. BELLUS E WASTE has agreed to ensure compliance to E Waste (Management and Handling) Rules, 2016("Rules") or any modification or enactment thereof, take charge of the said e waste generated by the College, collect, remove and dispose off the same from locations as specified by the College from time to time (hereinafter "Services") in the manner prescribed by the concerned authorities on the following terms and conditions agreed to between the Parties.

**NOW IT IS AGREED BETWEEN THE PARTIES HERETO AS FOLLOWS:**

**1. REPRESENTATIONS AND WARRANTIES AND COVENANTS:**

- 1.1 The College hereby appoints BELLUS E WASTE as the e-waste dismantler for its e waste.
- 1.2 BELLUS E WASTE represents and warrants that it has full power and authority to enter into this Agreement to perform the Services and that it has the necessary infrastructure and personnel to duly perform the Services under this Agreement.
- 1.3 BELLUS E WASTE represents and warrants to the College to ensure compliance with all relevant laws, ordinances, rules and regulations with respect to the performance of the Services under this Agreement and the applicable provisions of the Rules including but not limited to registration, maintenance of records, filing of returns etc in the manner, format and frequency prescribed under the provisions of such applicable laws.



  
**BELLUS-E-WASTE**  
# 4-120, Ramchandrapuram Village,  
Mahadevpur, Kondurg Mandal,  
Ranga Reddy Dist-509 207.  
**GSTIN: 36AASFB0812D1ZS**



**BELLUS  
E-WASTE**

# 4-120, Ramchandrapuram, Shad Nagar Industrial Area, Shad Nagar, Ranga Reddy District.

**Mob: 9393764108**

**Email: globaltraders108@gmail.com**

### 3.2 Severability

If any provision of this Agreement shall be found by any government or administrative body of competent jurisdiction to be invalid or unenforceable, the invalidity or un-Enforceability of such provision shall not affect the other provisions of this Agreement and all provisions not affected by such invalidity or unenforceability shall remain in full

force and effect. The Parties hereby agree to attempt to substitute for any invalid or unenforceable provision with a valid or enforceable provision, which achieves to the greatest extent possible the economic, legal and commercial objectives of the invalid or unenforceable provision.

### 3.3 Amendment

This Agreement may not be amended or modified by the Parties in any manner, except by an instrument in writing signed on behalf of each of the Parties to which such amendment or modification applies by a duly authorized officer or representative.

### 3.4 Survival

Any and all obligations under this Agreement which, by their very nature should reasonably survive the termination or expiration of this Agreement, will so survive, including, but not limited to, those arising from the BELLUS E WASTE's warranty, confidentiality, intellectual property and non-solicitation provisions of this Agreement.

### 3.5 Force Majeure

No delay, failure or omission by either Party to carry out or observe or perform any of the terms and conditions of this Agreement shall constitute default hereunder or give rise to any claim against such Party or be deemed a breach of this Agreement if such delay, failure or omission arises from an act of God, an act or omission of government, war or military operations, national or local emergency, fire, lightning, explosion, flood, subsidence, inclement weather, acts or omissions of persons or bodies for whom the Party is not responsible or any other cause whether similar or dissimilar outside such Party's control. However, such Party shall give prompt notice to the other Party and shall use reasonable efforts to avoid or remove such cause of non-performance and shall continue performance hereunder whenever such causes are removed.



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### 3.6 Entire Agreement

This Agreement constitutes the entire Agreement between the Parties and supersedes all oral and written representations and representations, warranties, undertakings or agreements between the Parties including, but not limited to any earlier agreement relating to the subject matter thereof or any other agreement between the Parties in relation to the subject matter hereof. However, this Agreement will not relieve the Parties from their respective rights and obligations against each other arising out of or in connection with any previous agreement.

### 3.7 Indemnification

BELLUS E WASTE shall discharge its obligations under this Agreement in compliance with all applicable laws. It is agreed and understood by the Parties that the College/its affiliates/its agents shall not in any manner be held liable for any acts or omissions of BELLUS E WASTE/its affiliates/their associates or employees in relation to the discharge of BELLUS E WASTE's obligations hereunder, irrespective of whether or not the College/its affiliates/its agents were aware of such acts or omissions or the consequences thereof. BELLUS E WASTE shall at its own expense indemnify, defend and hold harmless the College, its affiliates and its agents and their officers, directors, employees and agents from and against any breach of its obligations under this Agreement and all losses, liabilities, claims pertaining to injury to any persons/damage to any property, obligations, damages, costs, expenses (including, without limitation, reasonable attorneys' fees) which directly or indirectly result from, arise in connection with or are related in any way to any breach of any of the terms and conditions of this Agreement or failure in provision of any Services by BELLUS E WASTE/its affiliates or their associates or employees.

### 4. Relationship

The relationship of Parties established by this Agreement is that of independent contractors, and nothing in this Agreement shall be construed: (1) to give either Party



  
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the power to direct or control the daily activities of the other Party; (2) to constitute the Parties as employer and employee, principal and agent, partners, joint ventures, co-owners or otherwise as participants in a joint undertaking; or (3) to allow either Party to create or assume any obligation on behalf of the other Party for any purpose whatsoever. Nothing in this Agreement shall confer any right upon BELLUS E WASTE to use the College's trademarks, trade names, service marks, brand names or other intellectual property rights.

IN WITNESS WHEREOF the parties have put their respective signatures hereunder the day and year first hereinabove written.

For Megha Institute of Engineering and  
Technology for Women.  
represented by its Authorized Signatory

For Bellus E Waste  
represented by its Authorized Signatory

Signature

Name: **B.Sai Venkata Krishna**  
Vice-Principal, MIETW



Signature

Name: **Mohammed Younus**  
**BELLUS-E-WASTE**  
Bellus E-Waste  
\* 4-120, Ramchandrapuram Village,  
Mahadevpur, Kondur, Mandal,  
Ranga Reddy Dist-509 207.  
GSTIN: **36AASFB0812D1ZS**



## CONSCIENCE TECHNOLOGIES

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### Memorandum of Understanding

This Memorandum of Understanding is made at **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** on Monday of 24<sup>th</sup> December, 2018.

BETWEEN

**Conscience Technologies** is a fast growing technology solution and service provider established in 2010. Conscience Technologies has highly skilled and dedicated IT Professionals to provide customized IT Solutions for several industries using 7 Years of Technical Experience having its Corporate office at #17-83/2c, 3<sup>rd</sup> floor, Annapurna Function hall lane, Dilsukh Nagar, Hyderabad-500060, hereinafter referred to as “CT” (which term shall so far as the context admits be deemed to mean and include its successors, administrators, executors and Trainees) of the **First Part**.

AND

**MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** located at **Survey No.7, Edulabad(v), Ghatkesar(M), Medchal(D), Telangana-501301** hereinafter referred to as “MIETW” (Which term shall so far as the context admits be deemed to mean and include its successors and assigns) of the **Second Part**,

### **WHEREAS:**

1. CT is a Training Partner associated with various Colleges for providing training to the students as part of their project development and training activity.
2. **MIETW** College is an Educational institution affiliated to **JNTU** University. The College offers various Under Graduate program in **ECE, EEE** Stream.
3. **MIETW** College is willing to enter into a Memorandum of Understanding (MOU) with **CT** for the skills enhancement initiative through project development and training, the technology platform and other face to face initiatives.

#17-83/2C, 3rd Floor, Opp:Bank of Maharashtra,  
Annapurna Function Hall Line, Dilsukhnagar, Hyderabad-500060 Email: [info@consciencetechnologies.com](mailto:info@consciencetechnologies.com)  
[www.consciencetechnologies.com](http://www.consciencetechnologies.com) PH: 040 60 12 11 99





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**NOW IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO AS UNDER:**

**1. Objective:**

The objective of this MOU is to enable students of **MIETW** College access resources that would enhance their employability.

**2. Period of MOU:**

This MOU shall come into force and effect from the date of execution and shall remain valid for a period of **Three (03)** year from such date after which the same may be reviewed by either party. However, if the same is not renewed this arrangement will be deemed terminated on the expiry of the said duration period.

**3. Roles & Responsibilities of the CT:**

1. CT shall provide services to MIETW like Internships opportunities, Providing Assistance to Project work, Arranging Guest Lectures, Enhancing the Technical skills of the students, Arranging Industrial visits, Conduct of Faculty Development Program(FDP) etc.
2. Two engineers from M/s Conscience Technologies will be available for guiding the students at any instant of time whenever event is carried out at MIETW.
3. The event schedule prepared by coordinators of the department and Director M/s Conscience Technologies shall be strictly followed.
4. Class rooms and labs with necessary teaching aids shall be provided by the college during the event.
5. The agreement shall hold good for the academic year 2018.
6. CT will arrange for assessment of its own and also arrange external assessment as required.



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#### 4. Roles & Responsibilities of MIETW:

MIETW shall provide necessary infrastructure to CT for conduct of any event as scheduled by CT on confirmation.

MIETW shall adhere to the terms and conditions as laid by CT.

MIETW shall ensure that minimum numbers of participants are arranged for any event scheduled.

MIETW shall agree to pay if any financial implications are involved in conducting the event discussing upon both parties.

#### 5. Other Terms & Conditions:

Following are the other terms and conditions of MOU:

- a. The students enrolled should complete the task as scheduled.
- b. The students should be regular and support CT Trainers.
- c. Event Coordinator to be appointed by college
- d. Event Coordinator's/Guide's active support and participation is required for smooth & efficient conduct of the event
- e. The College shall not write/publish any material or use any logos/names of CT in any of the publications without prior written consent and approval from CT.

#### 6. Certification:

Certificates shall be awarded by CT to the students on successful completion of the program/Event.



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### 7. Limitations and Warranties :

Both parties agree that it would be their endeavour to prevent any liability arising out of default or non-compliance of the MOU terms by the other party.

### 8. Termination:

- a. Both parties can terminate the MOU with a prior written thirty (30) day notice on default of terms of non-adherence to any condition or responsibilities by the other party as outlined in this MOU in case such default is not rectified within such 30 days.
- b. Both parties also agree that it would be their professional endeavour that despite any termination of the MOU, progress would continue, which would be without any hindrance and would be progressed for completion.

### 9. Entirety & Amendment:

This MOU contains the entire understanding between the Parties in relation to the activities stated above. If during the operation of the MOU, circumstances may rise which call for alteration / modification to this MOU, such alteration / modification shall be mutually discussed and agreed upon in writing. Such changes will be formalized in writing as an 'Addendum' to this MOU. Any changes/amendments to this MOU not in conformance to this section shall be deemed to be void-ab-initio.

### 10. Intellectual Proprietary Rights:

All intellectual or proprietary property and information, supplied or developed by either Party shall be and remain the sole and exclusive property of the Party who supplied or



## CONSCIENCE TECHNOLOGIES

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developed same. Upon termination of this MOU and upon written request, the Party in receipt of the requesting Party's intellectual or proprietary property and/or information pursuant to this MOU shall return such information to the requesting Party.

### 11. Confidential Information:

- a. Both parties undertake to each other to keep confidential all information (written or oral) concerning the business and affairs of the other, which has been obtained or received during the course(s) of performance hereunder, save that which is inconsequential or obvious;
- b. Already in its possession other than as a result of a breach of this clause; or in the hands of the public other than as a result of a breach of this clause.
- c. In the event of any of the parties becoming legally compelled to disclose any confidential information, such party shall give sufficient notice to the other party so as to enable the other party to seek a timely protective order or any other appropriate relief. If such an order or other relief cannot be obtained, the party being required to make such a disclosure shall make the disclosure of the Confidential Information only to the extent that is legally required of it and no further.
- d. Both parties agree not to deal directly or enter into any business agreement with any of the partners or associates or customers of either party during the term of the agreement and also after the agreement have been terminated, not earlier than two years from the date of termination.

### 12. Force Majeure:

- a. Neither party to this MOU shall be liable for any failure or delay on its part in performing any of its obligations under this MOU, if such failure or delay shall be

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result of or arising out of Force Majeure conditions and, provided that the party claiming Force Majeure shall use its best efforts to avoid or remove such cause of non-performance and shall fulfil and continue performance hereunder with the utmost dispatch whenever and to the extent such cause or causes are removed.



- b. Any extraordinary event, which cannot be controlled by the parties, shall for the purpose of this MOU be considered as a Force Majeure event. Such events include acts of God, acts or omissions of any Government or agency thereof, compliance with rules, regulations or order of any Government Authority. Provided however, if either party claims that existence of any of the aforesaid conditions is delaying or disabling the performance by said party of its obligations under this MOU, such party shall give immediate notice to the other party of the existence of such conditions whose existence are claimed to delay or disable the performance of obligations as aforesaid.

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement as on the day, month and year first hereinabove written

For Conscience Technologies

For MIETW College

  
(Authorized Signatory)  
Name: B.V.Krishna Reddy  
Designation: Managing Director  
Place: Hyderabad  
Date: 24-12-2018  
Stamp: 

  
(Authorized Signatory)  
Name: Dr.M.Venugopal  
Designation: Principal  
Place: Hyderabad  
Date: 24-12-2018  
Stamp: 



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

## ACADEMIC REGULATIONS FOR B.TECH. REGULAR STUDENTS

### WITH EFFECT FROM ACADEMIC YEAR 2018-19 (R-18)

#### 1.0 Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)

Jawaharlal Nehru Technological University Hyderabad (JNTUH) offers a 4-year (8 semesters) **Bachelor of Technology** (B.Tech.) degree programme, under Choice Based Credit System (CBCS) at its non-autonomous constituent and affiliated colleges with effect from the academic year 2018-19.

#### 2.0 **Eligibility for admission**

2.1 Admission to the under graduate (UG) programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.

2.2 The medium of instructions for the entire under graduate programme in Engineering & Technology will be **English** only.

#### 3.0 **B.Tech. Programme structure**

3.1 A student after securing admission shall complete the B.Tech. programme in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course. Each student shall secure 160 credits (with CGPA  $\geq 5$ ) required for the completion of the under graduate programme and award of the B.Tech. degree.

3.2 **UGC/ AICTE** specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

#### 3.2.1 **Semester scheme**

Each under graduate programme is of 4 academic years (8 semesters) with the academic year divided into two semesters of 22 weeks ( $\geq 90$  instructional days) each, each

semester having - ‘Continuous Internal Evaluation (CIE)’ and ‘Semester End Examination (SEE)’ under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) indicated by UGC, and curriculum/course structure as suggested by AICTE are followed.

### 3.2.2 Credit courses

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses or Tutorials.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses.

Courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab are mandatory courses. These courses will not carry any credits.

### 3.2.3 Subject Course Classification

All subjects/ courses offered for the under graduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The University has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project or Project Stage I & II
8		Industrial training/ Mini- project	Industrial training/ Summer Internship/ Industrial Oriented Mini-project/ Mini-project

9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses (subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

#### 4.0 Course registration

- 4.1 A ‘faculty advisor or counselor’ shall be assigned to a group of 20 students, who will advise the students about the under graduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.
- 4.2 The academic section of the college invites ‘registration forms’ from students before the beginning of the semester through ‘on-line registration’, ensuring ‘date and time stamping’. The on-line registration requests for any ‘current semester’ shall be **completed before the commencement of SEEs (Semester End Examinations) of the ‘preceding semester’**.
- 4.3 A student can apply for **on-line** registration, **only after** obtaining the ‘**written approval**’ from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/ counselor and the student.
- 4.4 A student may be permitted to register for all the subjects/ courses in a semester as specified in the course structure with maximum additional subject(s)/course(s) limited to 4 credits, based on **progress** and SGPA/ CGPA, and completion of the ‘**pre-requisites**’ as indicated for various subjects/ courses, in the department course structure and syllabus contents.
- 4.5 Choice for ‘**additional subjects/ courses**’ must be clearly indicated, which needs the specific approval and signature of the faculty advisor/ counselor.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during **on-line** registration for the subject(s) / course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- 4.7 Subject/ course options exercised through **on-line** registration are final and **cannot** be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head



of the department, with due notification and time-framed schedule, within the **first week** after the commencement of class-work for that semester.

- 4.8 Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor 'within a period of 15 days' from the beginning of the current semester.
- 4.9 **Open electives:** The students have to choose three open electives (OE-I, II & III) from the list of open electives given. However, the student cannot opt for an open elective subject offered by his own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- 4.10 **Professional electives:** The students have to choose six professional electives (PE-I to VI) from the list of professional electives given.
- 5.0 **Subjects/ courses to be offered**
- 5.1 A typical section (or class) strength for each semester shall be 60.
- 5.2 A subject/ course may be offered to the students, **only if** a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- 5.3 More than **one faculty member** may offer the **same subject** (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - '**first come first serve** basis and CGPA criterion' (i.e. the first focus shall be on early **on-line entry** from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- 5.4 If more entries for registration of a subject come into picture, then the Head of the Department concerned shall decide, whether or not to offer such a subject/ course for **two (or multiple) sections**.
- 5.5 In case of options coming from students of other departments/ branches/ disciplines (not considering **open electives**), first **priority** shall be given to the student of the '**parent department**'.
- 6.0 **Attendance requirements:**
- 6.1 A student shall be eligible to appear for the semester end examinations, if the student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab) for that semester. Two periods of attendance for each theory subject shall be considered, if the student appears for the mid-term examination of that subject. **This attendance should also be included in the fortnightly upload of attendance to the University.**

**The attendance of Mandatory Non-Credit courses should be uploaded separately to the University.**

- 6.2 Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.
- 6.3 A stipulated fee shall be payable for condoning of shortage of attendance.
- 6.4 Shortage of attendance below 65% in aggregate shall in **no** case be condoned.
- 6.5 **Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester.** They may seek re-registration for all those subjects registered in that semester in which the student is detained, by seeking re-admission into that semester as and when offered; if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the **same** set of elective subjects offered under that category.
- 6.6 A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

7.0 **Academic requirements**

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

- 7.1 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% (26 marks out of 75 marks) in the semester end examination, and a minimum of 40% (40 marks out of 100 marks) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that subject/ course.
- 7.2 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Industrial Oriented Mini Project/Summer Internship and seminar, if the student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student is deemed to have failed, if he (i) does not submit a report on Industrial Oriented Mini Project/Summer Internship, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in Industrial Oriented Mini Project/Summer Internship and seminar evaluations.

A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such 'one reappearance' evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

### 7.3 Promotion Rules

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 18 credits out of 37 credits i.e., 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3.	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 47 credits out of 79 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 73 credits out of 123 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- 7.4 A student (i) shall register for all courses/subjects covering 160 credits as specified and listed in the course structure, (ii) fulfills all the attendance and academic requirements for 160 credits, (iii) earn all 160 credits by securing SGPA  $\geq 5.0$  (in each semester), and CGPA (at the end of each successive semester)  $\geq 5.0$ , (iv) **passes all the mandatory courses**, to successfully complete the under graduate programme. The performance of the student in these 160 credits shall be taken into account for the calculation of 'the final CGPA (**at the end of under graduate programme**), and shall be indicated in the grade card of IV year II semester.
- 7.5 If a student registers for '**extra subjects**' (in the parent department or other departments/branches of Engg.) other than those listed subjects totaling to 160 credits as specified in the course structure of his department, the performances in those '**extra subjects**' (although evaluated and graded using the same procedure as that of the required 160 credits) will not be taken into account while calculating the SGPA and CGPA. For such '**extra subjects**' registered, percentage of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.4 above.
- 7.6 A student eligible to appear in the semester end examination for any subject/ course, but absent from it or failed (thereby failing to secure '**C**' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- 7.7 A student **detained in a semester due to shortage of attendance may be re-admitted in the same semester in the next academic year for fulfillment of academic requirements**. The academic regulations under which a student has been readmitted shall be applicable. However, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which the student has been detained.
- 7.8 A student **detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits**. The academic regulations under which the student has been readmitted shall be applicable to him.
- 8.0 **Evaluation - Distribution and Weightage of marks**
- 8.1 The performance of a student in every subject/course (including practicals and Project Stage – I & II) will be evaluated for 100 marks each, with 25 marks allotted for CIE (Continuous Internal Evaluation) and 75 marks for SEE (Semester End-Examination).
- 8.2 For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper and one assignment. The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper). The objective paper is set with 20 multiple choice, fill-

in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each carrying 5 marks. While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus. Five marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-term examination, and the second assignment should be submitted before the conduct of the second mid-term examination. The total marks secured by the student in each mid-term examination are evaluated for 25 marks, and the average of the two mid-term examinations shall be taken as the final marks secured by each student in Continuous Internal Evaluation. If any student is absent from any subject of a mid-term examination, an on-line test will be conducted for him by the University. The details of the end semester question paper pattern are as follows:

- 8.2.1** The semester end examinations (SEE) will be conducted for 75 marks consisting of two parts viz. i) **Part- A** for 25 marks, ii) **Part - B** for 50 marks.
- Part-A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each. The next five sub-questions are one from each unit and carry 3 marks each.
  - Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- 8.2.2** For subjects like **Engineering Graphics/Engineering Drawing**, the SEE shall consist of five questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions. There shall be no Part – A, and Part – B system.
- 8.2.3** For subjects like **Machine Drawing Practice/Machine Drawing**, the SEE shall be conducted for 75 marks consisting of two parts viz. (i) Part – A for 30 marks. 3 out of 4 questions must be answered, (ii) Part – B for 45 marks. Part – B is compulsory.
- 8.2.4** For the Subject **Estimation, Costing and Project Management**, the SEE paper should consist of Part- A, Part-B and Part C. (i) Part – A – 1 out of 2 questions from Unit – I for 30 Marks, (ii) Part – B – 1 out of 2 questions from Unit – II for 15 Marks, (iii) Part – C – 3 out of 5 questions from Units – III, IV, V for 30 Marks.
- 8.2.5** For subjects **Structural Engineering – I & II (RCC & STEEL)**, the SEE will be conducted for 75 marks consisting of 2 parts viz. (i) Part – A for 15 marks and, (i) Part – B for 60 marks. Part – A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit relating to design theory and codal provisions and carry 2 marks each. The next five sub-questions are from each unit and carry 1 mark each. Part – B consists of 5 questions (numbered 2 to 6)

carrying 12 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there is either or choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

- 8.3** For practical subjects there shall be a continuous internal evaluation during the semester for 25 marks and 75 marks for semester end examination. Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the examination branch of the University.
- 8.4** For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing, machine drawing practice and estimation), the distribution shall be 25 marks for continuous internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- 8.5** There shall be an Industrial Oriented Mini Project/Summer Internship, in collaboration with an industry of their specialization. Students will register for this immediately after III year II semester examinations and pursue it during summer vacation. Industrial Oriented Mini Project/Summer Internship shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 external marks. The committee consists of an external examiner, Head of the Department, supervisor of the Industrial Oriented mini project/Summer Internship and a senior faculty member of the department. There shall be no internal marks for Industrial Oriented Mini Project/Summer Internship.
- 8.6** There shall be a seminar presentation in IV year I semester. For the seminar, the student shall collect the information on a specialized topic, prepare a technical report, and submit it to the department. It shall be evaluated by the departmental committee consisting of Head of the Department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 100 internal marks. There shall be no semester end examination for the seminar.
- 8.7** UG project work shall be carried out in two stages: Project Stage – I during IV Year I Semester, Project Stage – II during IV Year II Semester. Each stage will be evaluated for 100 marks. Student has to submit project work report at the end of each semester. First report includes project work carried out in IV Year I semester and second report includes project work carried out in IV Year I & II Semesters. SEE for both project stages shall be completed before the commencement of SEE Theory examinations.
- 8.8** For Project Stage – I, the departmental committee consisting of Head of the Department, project supervisor and a senior faculty member shall evaluate the project

work for 75 marks and project supervisor shall evaluate for 25 marks. The student is deemed to have failed, if he (i) does not submit a report on Project Stage - I or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.9 For Project Stage – II, the external examiner shall evaluate the project work for 75 marks and the project supervisor shall evaluate it for 25 marks. The topics for industrial oriented mini project, seminar and Project Stage – I shall be different from one another. The student is deemed to have failed, if he (i) does not submit a report on Project Stage - II, or does not make a presentation of the same before the external examiner as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

For conducting viva-voce of project stage – II, University selects an external examiner from the list of experts in the relevant branch submitted by the Principal of the College.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if student fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.10 The laboratory marks and the internal marks awarded by the college are subject to scrutiny and scaling by the University wherever necessary. In such cases, the internal and laboratory marks awarded by the college will be referred to a committee. The committee will arrive at a scaling factor and the marks will be scaled accordingly. The recommendations of the committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the University rules and produced before the committees of the University as and when asked for.

- 8.11 For mandatory courses of Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab, a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the continuous internal evaluation for passing the subject/course. **These marks should also be uploaded along with the internal marks of other subjects.**

- 8.12 No marks or letter grades shall be allotted for mandatory/non-credit courses. Only Pass/Fail shall be indicated in Grade Card.

## 9.0 Grading procedure

- 9.1 Grades will be awarded to indicate the performance of students in each theory subject, laboratory / practicals, seminar, Industry Oriented Mini Project, and project Stage - I & II. Based on the percentage of marks obtained (Continuous Internal Evaluation plus

Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.

- 9.2 As a measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

<b>% of Marks Secured in a Subject/Course (Class Intervals)</b>	<b>Letter Grade (UGC Guidelines)</b>	<b>Grade Points</b>
<b>Greater than or equal to 90%</b>	<b>O (Outstanding)</b>	<b>10</b>
<b>80 and less than 90%</b>	<b>A<sup>+</sup> (Excellent)</b>	<b>9</b>
<b>70 and less than 80%</b>	<b>A (Very Good)</b>	<b>8</b>
<b>60 and less than 70%</b>	<b>B<sup>+</sup> (Good)</b>	<b>7</b>
<b>50 and less than 60%</b>	<b>B (Average)</b>	<b>6</b>
<b>40 and less than 50%</b>	<b>C (Pass)</b>	<b>5</b>
<b>Below 40%</b>	<b>F (FAIL)</b>	<b>0</b>
<b>Absent</b>	<b>Ab</b>	<b>0</b>

- 9.3 A student who has obtained an 'F' grade in any subject shall be deemed to have 'failed' and is required to reappear as a 'supplementary student' in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.
- 9.4 To a student who has not appeared for an examination in any subject, 'Ab' grade will be allocated in that subject, and he is deemed to have 'failed'. A student will be required to reappear as a 'supplementary student' in the semester end examination, as and when offered next. In this case also, the internal marks in those subjects will remain the same as those obtained earlier.
- 9.5 A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- 9.6 A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding 'credit points' (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

**Credit points (CP) = grade point (GP) x credits .... For a course**

- 9.7 A student passes the subject/ course only when **GP ≥ 5 ('C' grade or above)**



- 9.8 The Semester Grade Point Average (SGPA) is calculated by dividing the sum of credit points ( $\Sigma CP$ ) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to **two** decimal places. SGPA is thus computed as

$$SGPA = \{ \sum_{i=1}^N C_i G_i \} / \{ \sum_{i=1}^N C_i \} \dots \text{For each semester,}$$

where 'i' is the subject indicator index (takes into account all subjects in a semester), 'N' is the no. of subjects '**registered**' for the semester (as specifically required and listed under the course structure of the parent department),  $C_i$  is the no. of credits allotted to the  $i^{\text{th}}$  subject, and  $G_i$  represents the grade points (GP) corresponding to the letter grade awarded for that  $i^{\text{th}}$  subject.

- 9.9 The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in **all** registered courses in **all** semesters, and the total number of credits registered in **all** the semesters. CGPA is rounded off to **two** decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$CGPA = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \} \dots \text{for all S semesters registered}$$

(i.e., up to and inclusive of S semesters,  $S \geq 2$ ),

where '**M**' is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has '**registered**' i.e., from the 1<sup>st</sup> semester onwards up to and inclusive of the 8<sup>th</sup> semester, 'j' is the subject indicator index (takes into account all subjects from 1 to 8 semesters),  $C_j$  is the no. of credits allotted to the  $j^{\text{th}}$  subject, and  $G_j$  represents the grade points (GP) corresponding to the letter grade awarded for that  $j^{\text{th}}$  subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

**Illustration of calculation of SGPA:**

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
Course 1	4	A	8	4 x 8 = 32
Course 2	4	O	10	4 x 10 = 40
Course 3	4	C	5	4 x 5 = 20
Course 4	3	B	6	3 x 6 = 18
Course 5	3	A+	9	3 x 9 = 27
Course 6	3	C	5	3 x 5 = 15
	21			152

$$SGPA = 152/21 = 7.24$$

**Illustration of calculation of CGPA up to 3<sup>rd</sup> semester:**

Semester	Course/Subject Title	Credits Allotted	Letter Grade Secured	Corresponding Grade Point (GP)	Credit Points (CP)
I	Course 1	3	A	8	24
I	Course 2	3	O	10	30
I	Course 3	3	B	6	18
I	Course 4	4	A	8	32
I	Course 5	3	A+	9	27
I	Course 6	4	C	5	20
II	Course 7	4	B	6	24
II	Course 8	4	A	8	32
II	Course 9	3	C	5	15
II	Course 10	3	O	10	30
II	Course 11	3	B+	7	21
II	Course 12	4	B	6	24
II	Course 13	4	A	8	32
II	Course 14	3	O	10	30
III	Course 15	2	A	8	16
III	Course 16	1	C	5	5
III	Course 17	4	O	10	40
III	Course 18	3	B+	7	21
III	Course 19	4	B	6	24
III	Course 20	4	A	8	32
III	Course 21	3	B+	7	21
	<b>Total Credits</b>	<b>69</b>		<b>Total Credit Points</b>	<b>518</b>

$$\text{CGPA} = 518/69 = 7.51$$

The above illustrated calculation process of CGPA will be followed for each subsequent semester until 8<sup>th</sup> semester. The CGPA obtained at the end of 8<sup>th</sup> semester will become the final CGPA secured for entire B.Tech. Programme.

- 9.10** For merit ranking or comparison purposes or any other listing, **only** the ‘**rounded off**’ values of the CGPAs will be used.
- 9.11** SGPA and CGPA of a semester will be mentioned in the semester Memorandum of Grades if all subjects of that semester are passed in first attempt. Otherwise the SGPA and CGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester. However, mandatory courses will not be taken into consideration.

## 10.0 Passing standards

- 10.1 A student shall be declared successful or 'passed' in a semester, if he secures a GP  $\geq 5$  ('C' grade or above) in every subject/course in that semester (i.e. when the student gets an SGPA  $\geq 5.00$  at the end of that particular semester); and he shall be declared successful or 'passed' in the entire under graduate programme, only when gets a CGPA  $\geq 5.00$  for the award of the degree as required.
- 10.2 After the completion of each semester, a grade card or grade sheet shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, grade earned, etc.), credits earned.

## 11.0 Declaration of results

- 11.1 Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9.
- 11.2 For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

## 12.0 Award of degree

- 12.1 A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 160 credits (with CGPA  $\geq 5.0$ ), within 8 academic years from the date of commencement of the first academic year, shall be declared to have '**qualified**' for the award of B.Tech. degree in the chosen branch of Engineering selected at the time of admission.
- 12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.
- 12.3 A student with final CGPA (at the end of the under graduate programme)  $\geq 8.00$ , and fulfilling the following conditions - shall be placed in '**first class with distinction**'. However, he
- (i) Should have passed all the subjects/courses in '**first appearance**' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
  - (ii) Should have secured a CGPA  $\geq 8.00$ , at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
  - (iii) Should not have been detained or prevented from writing the semester end examinations in any semester due to shortage of attendance or any other reason.

A student not fulfilling any of the above conditions with final CGPA  $> 8$  shall be placed in '**first class**'.

- 12.4 Students with final CGPA (at the end of the under graduate programme)  $\geq 6.50$  but  $< 8.00$  shall be placed in '**first class**'.
- 12.5 Students with final CGPA (at the end of the under graduate programme)  $\geq 5.50$  but  $< 6.50$ , shall be placed in '**second class**'.
- 12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the under graduate programme)  $\geq 5.00$  but  $< 5.50$ , shall be placed in '**pass class**'.
- 12.7 A student with final CGPA (at the end of the under graduate programme)  $< 5.00$  will not be eligible for the award of the degree.
- 12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of '**Gold Medal**'.
- 13.0 **Withholding of results**
- 13.1 If the student has not paid the fees to the University at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and the student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.
- 14.0 **Student transfers**
- 14.1 There shall be no branch transfers after the completion of admission process.
- 14.2 There shall be no transfers from one college/stream to another within the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.
- 14.3 The students seeking transfer to colleges affiliated to JNTUH from various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of JNTUH, and also pass the subjects of JNTUH which the students have not studied at the earlier institution. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of JNTUH, the students have to study those subjects in JNTUH in spite of the fact that those subjects are repeated.
- 14.4 The transferred students from other Universities/institutions to JNTUH affiliated colleges who are on rolls are to be provided one chance to write the CBT (internal marks) in the **equivalent subject(s)** as per the clearance letter issued by the University.
- 14.5 The autonomous affiliated colleges have to provide one chance to write the internal examinations in the **equivalent subject(s)** to the students transferred from other universities/institutions to JNTUH autonomous affiliated colleges who are on rolls, as per the clearance (equivalence) letter issued by the University.
- 15.0 **Scope**
- 15.1 The academic regulations should be read as a whole, for the purpose of any interpretation.

- 15.2** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- 15.3** The University may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the University authorities.
- 15.4** Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.



## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

### **ACADEMIC REGULATIONS FOR B.TECH. (LATERAL ENTRY SCHEME) FROM THE AY 2019-20**

#### **1. Eligibility for award of B. Tech. Degree (LES)**

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

2. The student shall register for 123 credits and secure 123 credits with CGPA  $\geq 5$  from II year to IV year B.Tech. programme (LES) for the award of B.Tech. degree.

3. The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.

4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

#### **5. Promotion rule**

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 25 credits out of 42 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester.

		(ii) Must have secured at least 51 credits out of 86 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

### MALPRACTICES RULES

#### DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
	If the student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to

	practical) in which the student is appearing.	appear for the remaining examinations of the subjects of that semester/year.  The hall ticket of the student is to be cancelled and sent to the University.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the chief superintendent/assistant – superintendent / any officer on duty or	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that



	<p>misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.</p>	<p>subject and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.</p>
<p>7.</p>	<p>Leaves the exam hall taking away answer script or intentionally tears off the script or any part thereof inside or outside the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.</p>
<p>8.</p>	<p>Possesses any lethal weapon or firearm in the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.</p>

9.	If student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.  Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared for including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared for including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award a suitable punishment.	

#### **Malpractices identified by squad or special invigilators**

1. Punishments to the students as per the above guidelines.
2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
  - a. A show cause notice shall be issued to the college.
  - b. Impose a suitable fine on the college.
  - c. Shifting the examination centre from one college to another college for a specific period of not less than one year.

\* \* \* \* \*

  
Principal  
Megha Inst. of Engg. & Tech for Women  
Eduabad, Ghatkesar (Mdi),  
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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

**ACADEMIC REGULATIONS FOR B.TECH. REGULAR STUDENTS**

**WITH EFFECT FROM**

**ACADEMIC YEAR 2016-17 (R-16)**

- 1.0 **Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)**
- 1.1 JNTUH offers a 4-year (8 semesters) **Bachelor of Technology (B.Tech.)** degree programme, under Choice Based Credit System (CBCS) at its non-autonomous constituent and affiliated colleges with effect from the academic year 2016-17 in the following branches of Engineering:

Branch
Civil Engineering
Electrical and Electronics Engineering
Mechanical Engineering
Electronics and Communication Engineering
Computer Science and Engineering
Chemical Engineering
Electronics and Instrumentation Engineering
Bio-Medical Engineering
Information Technology
Mechanical Engineering (Mechatronics)
Electronics and Telematics Engineering
Metallurgy and Material Technology
Electronics and Computer Engineering
Mechanical Engineering (Production)
Aeronautical Engineering
Instrumentation and Control Engineering
Biotechnology
Automobile Engineering
Mining Engineering
Petroleum Engineering
Civil and Environmental Engineering
Mechanical Engineering (Nano Technology)
Computer Science & Technology
Pharmaceutical Engineering

## **2.0 Eligibility for admission**

**2.1** Admission to the under graduate programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.

**2.2** The medium of instructions for the entire under graduate programme in E&T will be **English** only.

## **3.0 B.Tech. Programme structure**

**3.1** A student after securing admission shall pursue the under graduate programme in B.Tech. in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course.

Each semester is structured to provide 24 credits, totaling to 192 credits for the entire B.Tech. programme.

Each student shall secure 192 credits (with CGPA  $\geq 5$ ) required for the completion of the under graduate programme and award of the B.Tech. degree.

**3.2** **UGC/ AICTE** specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

### **3.2.1 Semester scheme**

Each under graduate programme is of 4 academic years (8 semesters) with the academic year being divided into two semesters of 22 weeks ( $\geq 90$  instructional days) each, each semester having - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)'. Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) as indicated by UGC and curriculum / course structure as suggested by AICTE are followed.

### **3.2.2 Credit courses**

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses or Tutorials (T).

Courses like Environmental Science, Professional Ethics, Gender Sensitization lab and other student activities like NCC/NSO and NSS are identified as mandatory courses. These courses will not carry any credits.

### 3.2.3 Subject Course Classification

All subjects/ courses offered for the under graduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The university has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project
8		Industrial training/ Mini- project	Industrial training/ Internship/ UG Mini-project/ Mini-project
9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses (subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

### 4.0 Course registration

4.1 A ‘faculty advisor or counselor’ shall be assigned to a group of 15 students, who will advise student about the under graduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.

- 4.2 The academic section of the college invites 'registration forms' from students before the beginning of the semester through 'on-line registration', ensuring 'date and time stamping'. The on-line registration requests for any 'current semester' shall be **completed before the commencement of SEEs (Semester End Examinations) of the 'preceding semester'**.
- 4.3 A student can apply for **on-line** registration, **only after** obtaining the '**written approval**' from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/ counselor and the student.
- 4.4 A student may be permitted to register for the subjects/ courses of **choice** with a total of 24 credits per semester (minimum of 20 credits and maximum of 28 credits per semester and permitted deviation of  $\pm 17\%$ ), based on **progress** and SGPA/ CGPA, and completion of the '**pre-requisites**' as indicated for various subjects/ courses, in the department course structure and syllabus contents. However, a **minimum** of 20 credits per semester must be registered to ensure the '**studentship**' in any semester.
- 4.5 Choice for '**additional subjects/ courses**' to reach the maximum permissible limit of 28 credits (above the typical 24 credit norm) must be clearly indicated, which needs the specific approval and signature of the faculty advisor/ counselor.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during **on-line** registration for the subject(s) / course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- 4.7 Subject/ course options exercised through **on-line** registration are final and **cannot** be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head of the department, with due notification and time-framed schedule, within the **first week** after the commencement of class-work for that semester.
- 4.8 Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor (subject to retaining a minimum of 20 credits), '**within a period of 15 days**' from the beginning of the current semester.
- 4.9 **Open electives:** The students have to choose one open elective (OE-I) during III year I semester, one (OE-II) during III year II semester, and one (OE-III) in IV year II semester, from the list of open electives given. However, the student cannot opt for an open elective subject offered by their own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- 4.10 **Professional electives:** students have to choose professional elective (PE-I) in III year II semester, Professional electives II, III, and IV (PE-II, III and IV) in IV year I

semester, Professional electives V, and VI (PE-V and VI) in IV year II semester, from the list of professional electives given. However, the students may opt for professional elective subjects offered in the related area.

**5.0 Subjects/ courses to be offered**

- 5.1** A typical section (or class) strength for each semester shall be 60.
- 5.2** A subject/ course may be offered to the students, **only if** a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- 5.3** More than **one faculty member** may offer the **same subject** (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - '**first come first serve** basis and CGPA criterion' (i.e. the first focus shall be on early **on-line entry** from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- 5.4** If more entries for registration of a subject come into picture, then the Head of Department concerned shall decide, whether or not to offer such a subject/ course for **two (or multiple) sections**.
- 5.5** In case of options coming from students of other departments/ branches/ disciplines (not considering **open electives**), first **priority** shall be given to the student of the '**parent department**'.

**6.0 Attendance requirements:**

- 6.1** A student shall be eligible to appear for the semester end examinations, if student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses Environmental Science, Professional Ethics, Gender Sensitization Lab, NCC/NSO and NSS) for that semester.
- 6.2** Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.
- 6.3** A stipulated fee shall be payable towards condoning of shortage of attendance.
- 6.4** Shortage of attendance below 65% in aggregate shall in **no** case be condoned.
- 6.5** **Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester.** They may seek re-registration for all those subjects registered in that semester in which student was detained, by seeking re-admission into that semester as and when offered; in case if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the **same** set of elective subjects offered under that category.

**6.6** A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

**7.0 Academic requirements**

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

**7.1** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% marks (26 out of 75 marks) in the semester end examination, and a minimum of 40% of marks in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing ‘C’ grade or above in that subject/ course.

**7.2** A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to UG Mini Project and seminar, if student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student would be treated as failed, if student (i) does not submit a report on UG Mini Project, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in industry UG Mini Project / seminar evaluations.

Student may reappear once for each of the above evaluations, when they are scheduled again; if student fails in such ‘one reappearance’ evaluation also, student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

**7.3 Promotion Rules**

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 24 credits out of 48 credits i.e., 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3.	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester	(i) Regular course of study of second



	to third year first semester	year second semester. <b>(ii) Must have secured at least 58 credits out of 96 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.</b>
5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	<b>(i) Regular course of study of third year second semester.</b> <b>(ii) Must have secured at least 86 credits out of 144 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.</b>
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- 7.4** A student shall register for all subjects covering 192 credits as specified and listed in the course structure, fulfills all the attendance and academic requirements for 192 credits, 'earn all 192 credits by securing SGPA  $\geq$  5.0 (in each semester), and CGPA (at the end of each successive semester)  $\geq$  5.0, to successfully complete the under graduate programme.
- 7.5** After securing the necessary 192 credits as specified for the successful completion of the entire under graduate programme, the student can avail exemption of two subjects up to 6 credits, that is, one open elective and one professional elective subject or two professional elective subjects for optional drop out from these 192 credits earned; resulting in 186 credits for under graduate programme performance evaluation, i.e., the performance of the student in these 186 credits shall alone be taken into account for the calculation of 'the final CGPA (at the end of under graduate programme, which takes the SGPA of the IV year II semester into account)', and shall be indicated in the grade card of IV year II semester. However, the performance of student in the earlier individual semesters, with the corresponding SGPA and CGPA for which grade cards have already been given will not be altered.
- 7.6** If a student registers for some more 'extra subjects' (in the parent department or other departments/branches of engg.) other than those listed subjects totaling to 192

credits as specified in the course structure of his department, the performances in those '**extra subjects**' (although evaluated and graded using the same procedure as that of the required 192 credits) will not be taken into account while calculating the SGPA and CGPA. For such '**extra subjects**' registered, % of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.5 above.

- 7.7 A student eligible to appear in the end semester examination for any subject/ course, but absent from it or failed (thereby failing to secure '**C**' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- 7.8 A student **detained in a semester due to shortage of attendance may be re-admitted when the same semester is offered in the next academic year for fulfillment of academic requirements.** The academic regulations under which student has been readmitted shall be applicable. However, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which student has been detained.
- 7.9 A student **detained due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits.** The academic regulations under which student has been readmitted shall be applicable to him.
- 8.0 **Evaluation - Distribution and Weightage of marks**
- 8.1 The performance of a student in every subject/course (including practicals and UG major project) will be evaluated for 100 marks each, with 25 marks allotted for CIE (Continuous Internal Evaluation) and 75 marks for SEE (Semester End-Examination).
- 8.2 For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper and one assignment. The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper). The objective paper is set with 20 bits of multiple choice, fill-in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each carrying 5 marks. While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus. Five marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-examination, and the second assignment should be submitted before the conduct of the second mid-examination. The total marks secured by the student in each mid-term examination are evaluated for 25 marks, and the average of the two mid-term examinations shall be taken as the

final marks secured by each student in internals/sessionals. If any student is absent from any subject of a mid-term examination, an on-line test will be conducted for him by the university. The details of the question paper pattern are as follows,

- The end semester examinations will be conducted for 75 marks consisting of two parts viz. i) **Part- A** for 25 marks, ii) **Part - B** for 50 marks.
- Part-A is compulsory question which consists of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each. The next five sub-questions are one from each unit and carry 3 marks each.
- Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

- 8.3** For practical subjects there shall be a continuous internal evaluation during the semester for 25 sessional marks and 75 semester end examination marks. Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the examination branch of the university.
- 8.4** For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing) and estimation, the distribution shall be 25 marks for continuous internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- 8.5** There shall be an UG mini-project, in collaboration with an industry of their specialization. Students will register for this immediately after III year II semester examinations and pursue it during summer vacation. The UG mini-project shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 marks. The committee consists of an external examiner, Head of the Department, supervisor of the UG mini-project and a senior faculty member of the department. There shall be no internal marks for UG mini-project.
- 8.6** There shall be a seminar presentation in IV year I semester. For the seminar, the student shall collect the information on a specialized topic, prepare a technical report, and submit it to the department. It shall be evaluated by the departmental committee consisting of Head of the Department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 100 marks. There shall be no semester end examination for the seminar.

- 8.7** Out of a total of 100 marks for the UG major Project, 25 marks shall be allotted for internal evaluation and 75 marks for the end semester examination (viva voce). The end semester examination of the UG major Project shall be conducted by the same committee as appointed for the UG mini-project. In addition, the UG major Project supervisor shall also be included in the committee. The topics for UG mini project, seminar and UG major Project shall be different from one another. The evaluation of UG major Project shall be made at the end of IV year II semester. The internal evaluation shall be on the basis of two seminars given by each student on the topic of UG major Project.
- 8.8** The laboratory marks and the sessional marks awarded by the college are subject to scrutiny and scaling by the university wherever necessary. In such cases, the sessional and laboratory marks awarded by the college will be referred to a committee. The committee will arrive at a scaling factor and the marks will be scaled accordingly. The recommendations of the committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the university rules and produced before the committees of the university as and when asked for.
- 8.9** For mandatory courses Environmental Science, Professional Ethics and gender sensitization lab, a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the continuous internal evaluation for passing the subject/course.
- 8.10** For mandatory courses NCC/ NSO and NSS, a 'satisfactory participation certificate' shall be issued to the student from the authorities concerned, only after securing  $\geq 65\%$  attendance in such a course.
- 8.11** No marks or letter grade shall be allotted for all mandatory/non-credit courses.
- 9.0 Grading procedure**
- 9.1** Marks will be awarded to indicate the performance of student in each theory subject, laboratory / practicals, seminar, UG mini project, UG major project. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.
- 9.2** As a measure of the performance of student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

<b>% of Marks Secured in a Subject/Course (Class Intervals)</b>	<b>Letter Grade (UGC Guidelines)</b>	<b>Grade Points</b>
<b>Greater than or equal to 90%</b>	<b>O (Outstanding)</b>	<b>10</b>
<b>80 and less than 90%</b>	<b>A<sup>+</sup> (Excellent)</b>	<b>9</b>

70 and less than 80%	A (Very Good)	8
60 and less than 70%	B <sup>+</sup> (Good)	7
50 and less than 60%	B (Average)	6
40 and less than 50%	C (Pass)	5
Below 40%	F (FAIL)	0
Absent	Ab	0

- 9.3 A student obtaining 'F' grade in any subject shall be deemed to have 'failed' and is required to reappear as a 'supplementary student' in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.
- 9.4 A student who has not appeared for examination in any subject, 'Ab' grade will be allocated in that subject, and student shall be considered 'failed'. Student will be required to reappear as a 'supplementary student' in the semester end examination, as and when offered.
- 9.5 A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- 9.6 A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding 'credit points' (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

**Credit points (CP) = grade point (GP) x credits .... For a course**

- 9.7 The student passes the subject/ course only when  $GP \geq 5$  ('C' grade or above)
- 9.8 The semester grade point average (SGPA) is calculated by dividing the sum of credit points ( $\Sigma CP$ ) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to **two** decimal places. SGPA is thus computed as

$$SGPA = \{ \sum_{i=1}^N C_i G_i \} / \{ \sum_{i=1}^N C_i \} \dots \text{For each semester,}$$

where 'i' is the subject indicator index (takes into account all subjects in a semester), 'N' is the no. of subjects 'registered' for the semester (as specifically required and listed under the course structure of the parent department),  $C_i$  is the no. of credits allotted to the  $i^{\text{th}}$  subject, and  $G_i$  represents the grade points (GP) corresponding to the letter grade awarded for that  $i^{\text{th}}$  subject.

**9.9** The cumulative grade point average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in **all** registered courses in **all** semesters, and the total number of credits registered in **all** the semesters. CGPA is rounded off to **two** decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$\text{CGPA} = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \} \dots \text{for all } S \text{ semesters registered}$$

(i.e., up to and inclusive of S semesters,  $S \geq 2$ ),

where 'M' is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has '**registered**' i.e., from the 1<sup>st</sup> semester onwards up to and inclusive of the 8<sup>th</sup> semester, 'j' is the subject indicator index (takes into account all subjects from 1 to 8 semesters),  $C_j$  is the no. of credits allotted to the j<sup>th</sup> subject, and  $G_j$  represents the grade points (GP) corresponding to the letter grade awarded for that j<sup>th</sup> subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

#### Illustration of calculation of SGPA

Illustration of calculation of CGPA: Letter Course/Subject	Credits	Grade	Grade Points	Credit Points
Course 1	4	A	8	4 x 8 = 32
Course 2	4	O	10	4 x 10 = 40
Course 3	4	C	5	4 x 5 = 20
Course 4	3	B	6	3 x 6 = 18
Course 5	3	A+	9	3 x 9 = 27
Course 6	3	C	5	3 x 5 = 15
	21			152

$$\text{SGPA} = 152/21 = 7.23$$

Semester	Credits	SGPA	Credits x SGPA
Semester I	24	7	24 x 7 = 168
Semester II	24	6	24 x 6 = 144
Semester III	24	6.5	24 x 6.5 = 156
Semester IV	24	6	24 x 6 = 144
Semester V	24	7.5	24 x 7.5 = 180

Semester VI	24	8	24 x 8 = 192
Semester VII	24	8.5	24 x 8.5 = 204
Semester VIII	24	8	24 x 8 = 192
	192		1380

$$\text{CGPA} = 1380/192 = 7.18$$

**9.10** For merit ranking or comparison purposes or any other listing, **only** the ‘**rounded off**’ values of the CGPAs will be used.

**9.11** For calculations listed in regulations 9.6 to 9.9, performance in failed subjects/ courses (securing **F** grade) will also be taken into account, and the credits of such subjects/ courses will also be included in the multiplications and summations. After passing the failed subject(s) newly secured letter grades will be taken into account for calculation of SGPA and CGPA. However, mandatory courses will not be taken into consideration.

#### **10.0 Passing standards**

**10.1** A student shall be declared successful or ‘passed’ in a semester, if student secures a GP  $\geq 5$  (‘C’ grade or above) in every subject/course in that semester (i.e. when student gets an SGPA  $\geq 5.00$  at the end of that particular semester); and a student shall be declared successful or ‘passed’ in the entire under graduate programme, only when gets a CGPA  $\geq 5.00$  for the award of the degree as required.

**10.2** After the completion of each semester, a grade card or grade sheet (or transcript) shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, and grade earned etc.), credits earned, SGPA, and CGPA.

#### **11.0 Declaration of results**

**11.1** Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9.

**11.2** For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

#### **12.0 Award of degree**

**12.1** A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 192 credits (with CGPA  $\geq 5.0$ ), within 8 academic years from the date of commencement of the first academic year, shall be declared to have ‘**qualified**’ for the award of the B.Tech. degree in the chosen branch of Engineering as selected at the time of admission.

- 12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.
- 12.3 Students with final CGPA (at the end of the under graduate programme)  $\geq 8.00$ , and fulfilling the following conditions -
- (i) Should have passed all the subjects/courses in '**first appearance**' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
  - (ii) Should have secured a CGPA  $\geq 8.00$ , at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
  - (iii) Should not have been detained or prevented from writing the end semester examinations in any semester due to shortage of attendance or any other reason, shall be placed in '**first class with distinction**'.
- 12.4 Students with final CGPA (at the end of the under graduate programme)  $\geq 6.50$  but  $< 8.00$ , shall be placed in '**first class**'.
- 12.5 Students with final CGPA (at the end of the under graduate programme)  $\geq 5.50$  but  $< 6.50$ , shall be placed in '**second class**'.
- 12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the under graduate programme)  $\geq 5.00$  but  $< 5.50$ , shall be placed in '**pass class**'.
- 12.7 A student with final CGPA (at the end of the under graduate programme)  $< 5.00$  will not be eligible for the award of the degree.
- 12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of '**university rank**' and '**gold medal**'.
- 13.0 **Withholding of results**
- 13.1 If the student has not paid the fees to the university/ college at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.
- 14.0 **Transitory regulations**
- A. **For students detained due to shortage of attendance:**
1. A Student who has been detained in I year of R09/R13/R15 Regulations due to lack of attendance, shall be permitted to join I year I Semester of R16 Regulations and he is required to complete the study of B.Tech./B. Pharmacy programme within the stipulated period of eight academic years from the date of first admission in I Year.
  2. A student who has been detained in any semester of II, III and IV years of R09/R13/R15 regulations for want of attendance, shall be permitted to join the corresponding semester of R16 regulations and is required to complete the study of



B.Tech./B. Pharmacy within the stipulated period of eight academic years from the date of first admission in I Year. The R16 Academic Regulations under which a student has been readmitted shall be applicable to that student from that semester.

See rule (C) for further Transitory Regulations.

**B. For students detained due to shortage of credits:**

3. A student of R09/R13/R15 Regulations who has been detained due to lack of credits, shall be promoted to the next semester of R16 Regulations only after acquiring the required credits as per the corresponding regulations of his/her first admission. The student is required to complete the study of B.Tech./B. Pharmacy within the stipulated period of eight academic years from the year of first admission. The R16 Academic Regulations are applicable to a student from the year of readmission onwards.

See rule (C) for further Transitory Regulations.

**C. For readmitted students in R16 Regulations:**

4. A student who has failed in any subject under any regulation has to pass those subjects in the same regulations.
5. The maximum credits that a student acquires for the award of degree, shall be the sum of the total number of credits secured in all the regulations of his/her study including R16 Regulations. The performance evaluation of the student will be done after the exemption of two subjects if total credits acquired are  $\leq 206$ , three subjects if total credits acquired are  $> 206$  (see R16 Regulations for exemption details).
6. If a student readmitted to R16 Regulations, has any subject with 80% of syllabus common with his/her previous regulations, that particular subject in R16 Regulations will be substituted by another subject to be suggested by the University.

**Note:** If a student readmitted to R16 Regulations, has not studied any subjects/topics in his/her earlier regulations of study which is prerequisite for further subjects in R16 Regulations, the College Principals concerned shall conduct remedial classes to cover those subjects/topics for the benefit of the students.

**15.0 Student transfers**

**15.1** There shall be no branch transfers after the completion of admission process.

**15.2** There shall be no transfers from one college/stream to another within the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.

**15.3** The students seeking transfer to colleges affiliated to JNTUH from various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of JNTUH, and also pass the subjects of JNTUH which the students have not studied at the earlier institution. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of JNTUH, the students have to study those subjects in JNTUH in spite of the fact that those subjects are repeated.

- 15.4** The transferred students from other Universities/institutions to JNTUH affiliated colleges who are on rolls to be provide one chance to write the CBT (internal marks) in the **failed subjects and/or subjects not studied** as per the clearance letter issued by the university.
- 15.5** The autonomous affiliated colleges have to provide one chance to write the internal examinations in the **failed subjects and/or subjects not studied**, to the students transferred from other universities/institutions to JNTUH autonomous affiliated colleges who are on rolls, as per the clearance (equivalence) letter issued by the University.
- 16.0 Scope**
- 16.1** The academic regulations should be read as a whole, for the purpose of any interpretation.
- 16.2** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the vice-chancellor is final.
- 16.3** The university may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the university authorities.



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

**Academic Regulations for B.Tech. (Lateral Entry Scheme) from the AY 2017-18**

**1. Eligibility for award of B. Tech. Degree (LES)**

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

- The student shall register for 144 credits and secure 144 credits with CGPA  $\geq 5$  from II year to IV year B.Tech. programme (LES) for the award of B.Tech. degree. **Out of the 144 credits secured, the student can avail exemption up to 6 credits**, that is, one open elective subject and one professional elective subject or two professional elective subjects resulting in 138 credits for B.Tech programme performance evaluation.
- The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.
- The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

**5. Promotion rule**

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 29 credits out of 48 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 58 credits out of 96 credits i.e., 60% credits up to third year second semester from all the

		<b>relevant regular and supplementary examinations, whether the student takes those examinations or not.</b>
<b>5</b>	<b>Fourth year first semester to fourth year second semester</b>	<b>Regular course of study of fourth year first semester.</b>

6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

### **MALPRACTICES RULES**

#### **DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS**

	<b>Nature of Malpractices/Improper conduct</b>	<b>Punishment</b>
	If the student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the student is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year.

		The hall ticket of the student is to be cancelled and sent to the university.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the chief superintendent/assistant – superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining

	<p>others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.</p>	<p>examinations of the subjects of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.</p>
7.	<p>Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.</p>
8.	<p>Possess any lethal weapon or firearm in the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.</p>
9.	<p>If student of the college, who is not a student for the particular examination or any person not connected with the</p>	<p>Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other</p>

	college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the university for further action to award suitable punishment.	

#### Malpractices identified by squad or special invigilators

1. Punishments to the students as per the above guidelines.
2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
  - a. A show cause notice shall be issued to the college.
  - b. Impose a suitable fine on the college.
  - c. Shifting the examination centre from the college to another college for a specific period of not less than one year.

\* \* \* \* \*

  
**Principal**  
**Megha Inst. of Engg. & Tech for Women**  
**Edulabad, Ghatkesar (MdI),**  
**Medchal Dist-501 301**

**ACADEMIC REGULATIONS R13 FOR B. TECH. (REGULAR)**

Applicable for the students of B. Tech. (Regular) from the Academic Year 2013-14 and onwards

1. **Award of B. Tech. Degree**

A student will be declared eligible for the award of B. Tech. Degree if he fulfils the following academic regulations:

- 1.1 The candidate shall pursue a course of study for not less than four academic years and not more than eight academic years.
- 1.2 After eight academic years of course of study, the candidate is permitted to write the examinations for two more years.
- 1.3 The candidate shall register for 224 credits and secure 216 credits with compulsory subjects as listed in Table-1.

**Table 1: Compulsory Subjects**

Serial Number	Subject Particulars
1	All practical subjects
2	Industry oriented mini project
3	Comprehensive Viva-Voce
4	Seminar
5	Project work

- 2 The students, who fail to fulfill all the academic requirements for the award of the degree within ten academic years from the year of their admission, shall forfeit their seats in B. Tech. course.

3 **Courses of study**

The following courses of study are offered at present as specializations for the B. Tech. Course:

Branch Code	Branch
01	Civil Engineering
02	Electrical and Electronics Engineering
03	Mechanical Engineering
04	Electronics and Communication Engineering
05	Computer Science and Engineering
08	Chemical Engineering
10	Electronics and Instrumentation Engineering



11	Bio-Medical Engineering
12	Information Technology
14	Mechanical Engineering (Mechatronics)
17	Electronics and Telematics Engineering
18	Metallurgy and Material Technology
19	Electronics and Computer Engineering
20	Mechanical Engineering (Production)
21	Aeronautical Engineering
22	Instrumentation and Control Engineering
23	Biotechnology
24	Automobile Engineering
25	Mining Engineering
26	Mining Machinery
27	Petroleum Engineering
28	Civil and Environmental Engineering
29	Mechanical Engineering (Nano Technology)
30	Agricultural Engineering
31	Computer Science & Technology

**4 Credits**

	I Year		Semester	
	Periods / Week	Credits	Periods / Week	Credits
Theory	03+1/03	06	04	04
	02	04	—	—
Practical	03	04	03	02
Drawing	02+03	06	03	02
			06	04
Mini Project	—	—	—	02
Comprehensive Viva Voce	—	—	—	02
Seminar	—	—	6	02
Project	—	--	15	10

**5 Distribution and Weightage of Marks**

- 5.1 The performance of a student in each semester or I year shall be evaluated subject-wise for a maximum of 100 marks for a theory and 75 marks for a practical subject. In addition, industry-oriented mini-project, seminar and project work shall be evaluated for 50, 50 and 200 marks, respectively.
- 5.2 For theory subjects the distribution shall be 25 marks for Internal Evaluation and 75 marks for the End-Examination.
- 5.3 For theory subjects, during a semester there shall be 2 mid-term examinations. Each mid-term examination consists of one objective paper, one essay paper and one assignment. The objective paper and the essay paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for essay paper). The Objective paper is set with 20 bits of multiple choice, fill-in the blanks and matching type of questions for a total of 10 marks. The essay paper shall contain 4 full questions (one from each unit) out of which, the student has to answer 2 questions, each carrying 5 marks. While the first mid-term examination shall be conducted on 1 to 2.5 units of the syllabus, the second mid-term examination shall be conducted on 2.5 to 5 units. Five (5) marks are allocated for Assignments (as specified by the subject teacher concerned). The first Assignment should be submitted before the conduct of the first mid-examination, and the second Assignment should be submitted before the conduct of the second mid-examination. The total marks secured by the student in each mid-term examination are evaluated for 25 marks, and the average of the two mid-term examinations shall be taken as the final marks secured by each candidate. However, in the I year, there shall be 3 mid term examinations, each for 25 marks, along with 3 assignments in a similar pattern as above (1<sup>st</sup> mid shall be from Unit-I, 2<sup>nd</sup> mid shall be 2 & 3 Units and 3<sup>rd</sup> mid shall be 4 & 5 Units) and the average marks of the examinations secured (each evaluated for a total of 25 marks) in each subject shall be considered to be final marks for the internals/sessionals. If any candidate is absent from any subject of a mid-term examination, an on-line test will be conducted for him by the University.

***The details of the Question Paper pattern without deviating from the R13 regulations as notified in the website is as follows:***

- ***The End semesters Examination will be conducted for 75 marks which consists of two parts viz. i). Part-A for 25 marks, ii). Part –B for 50 marks.***
- ***Part-A is compulsory question which consists of ten sub-questions. The first five sub-questions are from each unit and carries 2 marks each. The next five sub-questions***

*are one from each unit and carries 3 marks each.*

- ***Part-B consists of five Questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice (that means there will be two questions from each unit and the student should answer any one question)***
- 5.4 For practical subjects there shall be a continuous evaluation during a semester for 25 sessional marks and 50 end semester examination marks. Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned. The end semester examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the examination branch of the University.
- 5.5 For the subject having design and/or drawing, (such as Engineering Graphics, Engineering Drawing, Machine Drawing) and Estimation, the distribution shall be 25 marks for internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for end semester examination. There shall be two internal tests in a Semester and the average of the two shall be considered for the award of marks for internal tests. However, in the I year class, there shall be three tests and the average will be taken into consideration.
- 5.6 There shall be an industry-oriented Mini-Project, in collaboration with an industry of their specialization, to be taken up during the vacation after III year II Semester examination. However, the mini-project and its report shall be evaluated along with the project work in IV year II Semester. The industry oriented mini-project shall be submitted in a report form and presented before the committee. It shall be evaluated for 50 marks. The committee consists of an external examiner, head of the department, the supervisor of the mini-project and a senior faculty member of the department. There shall be no internal marks for industry-oriented mini-project.
- 5.7 There shall be a seminar presentation in IV year II Semester. For the seminar, the student shall collect the information on a specialized topic and prepare a technical report, showing his understanding of the topic, and submit it to the department. It shall be evaluated by the departmental committee consisting of head of the department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 50 marks. There shall be no external examination for the seminar.
- 5.8 There shall be a Comprehensive Viva-Voce in IV year II semester.

The Comprehensive Viva-Voce will be conducted by a Committee consisting of Head of the Department and two Senior Faculty members of the Department. The Comprehensive Viva-Voce is intended to assess the student's understanding of the subjects he studied during the B. Tech. course of study. The Comprehensive Viva-Voce is evaluated for 100 marks by the Committee. There are no internal marks for the Comprehensive Viva-Voce.

- 5.9 Out of a total of 200 marks for the project work, 50 marks shall be allotted for Internal Evaluation and 150 marks for the End Semester Examination (Viva Voce). The End Semester Examination of the project work shall be conducted by the same committee as appointed for the industry-oriented mini-project. In addition, the project supervisor shall also be included in the committee. The topics for industry oriented mini project, seminar and project work shall be different from one another. The evaluation of project work shall be made at the end of the IV year. The Internal Evaluation shall be on the basis of two seminars given by each student on the topic of his project.
- 5.10 The Laboratory marks and the sessional marks awarded by the College are subject to scrutiny and scaling by the University wherever necessary. In such cases, the sessional and laboratory marks awarded by the College will be referred to a Committee. The Committee will arrive at a scaling factor and the marks will be scaled accordingly. The recommendations of the Committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the University rules and produced before the Committees of the University as and when asked for.

## **6 Attendance Requirements**

- 6.1 A student is eligible to write the University examinations only if he acquires a minimum of 75% of attendance in aggregate of all the subjects.
- 6.2 Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) in each semester or I year may be granted by the College Academic Committee
- 6.3 Shortage of Attendance below 65% in aggregate shall not be condoned.
- 6.4 A student who is short of attendance in semester / I year may seek re-admission into that semester/I year when offered within 4 weeks from the date of the commencement of class work.
- 6.5 Students whose shortage of attendance is not condoned in any semester/I year are not eligible to write their end semester examination of that class and their registration stands cancelled.

- 6.6 A stipulated fee shall be payable towards condonation of shortage of attendance.
- 6.7 A student will be promoted to the next semester if he satisfies the attendance requirement of the present semester/I year, as applicable, including the days of attendance in sports, games, NCC and NSS activities.
- 6.8 If any candidate fulfills the attendance requirement in the present semester or I year, he shall not be eligible for readmission into the same class.

**7 Minimum Academic Requirements**

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no.6.

- 7.1 A student is deemed to have satisfied the minimum academic requirements if he has earned the credits allotted to each theory/practical design/drawing subject/project and secures not less than 35% of marks in the end semester exam, and minimum 40% of marks in the sum total of the mid-term and end semester exams.
- 7.2 A student shall be promoted from first year to second year if he fulfills the minimum attendance requirement.
- 7.3 A student will not be promoted from II year to III year unless he fulfills the academic requirement of 34 credits up to II year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in II year II semester.
- 7.4 A student shall be promoted from III year to IV year only if he fulfills the academic requirements of 56 credits up to III year I semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in III year II semester.
- 7.5 A student shall register and put up minimum attendance in all 224 credits and earn 216 credits. Marks obtained in the best 216 credits shall be considered for the calculation of percentage of marks.
- 7.6 Students who fail to earn 216 credits as indicated in the course structure within ten academic years (8 years of study + 2 years additionally for appearing for exams only) from the year of their admission, shall forfeit their seat in B.Tech. course and their admission stands cancelled.

**8 Course pattern**

- 8.1 The entire course of study is for four academic years. I year shall be on yearly pattern and II, III and IV years on semester pattern.
- 8.2 A student, eligible to appear for the end examination in a subject, but absent from it or has failed in the end semester examination, may

write the exam in that subject during the period of supplementary exams.

- 8.3 When a student is detained for lack of credits/shortage of attendance, he may be re-admitted into the next semester/year. However, the academic regulations under which he was first admitted, shall continue to be applicable to him.

**9 Award of Class**

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B. Tech. Degree, he shall be placed in one of the following four classes:

<b>Class Awarded</b>	<b>% of marks to be secured</b>	<b>From the aggregate marks secured from 216 Credits.</b>
First Class with Distinction	70% and above	
First Class	Below 70 but not less than 60%	
Second Class	Below 60% but not less than 50%	
Pass Class	Below 50% but not less than 40%	

The marks obtained in internal evaluation and end semester / I year examination shall be shown separately in the memorandum of marks.

**10 Minimum Instruction Days**

The minimum instruction days for each semester/I year shall be 90/180 days.

- 11 There shall be no branch transfers after the completion of the admission process.
- 12 There shall be no transfer from one college/stream to another within the Constituent Colleges and Units of Jawaharlal Nehru Technological University Hyderabad.

**13 WITHHOLDING OF RESULTS**

If the student has not paid the dues, if any, to the university or if any case of indiscipline is pending against him, the result of the student will be withheld and he will not be allowed into the next semester. His degree will be withheld in such cases.

**14. TRANSITORY REGULATIONS**

- 14.1 Discontinued, detained, or failed candidates are eligible for readmission as and when next offered.
- 14.2 After the revision of the regulations, the students of the previous batches will be given two chances for passing in their failed subjects, one supplementary and the other regular. If the students cannot

clear the subjects in the given two chances, they shall be given equivalent subjects as per the revised regulations which they have to pass in order to obtain the required number of credits.

- 14.3 In case of transferred students from other Universities, the credits shall be transferred to JNTUH as per the academic regulations and course structure of the JNTUH.

**15. General**

- 15.1 Wherever the words "he", "him", "his", occur in the regulations, they include "she", "her", "hers".
- 15.2 The academic regulation should be read as a whole for the purpose of any interpretation.
- 15.3 In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- 15.4 The University may change or amend the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the University.
- 15.5 The students seeking transfer to colleges affiliated to JNTUH from various other Universities/Institutions, have to pass the failed subjects which are equivalent to the subjects of JNTUH, and also pass the subjects of JNTUH which the candidates have not studied at the earlier Institution on their own without the right to sessional marks. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of JNTUH, the candidates have to study those subjects in JNTUH in spite of the fact that those subjects are repeated.

\* \* \*

**Academic Regulations R13 For B.Tech. (Lateral Entry Scheme)**

Applicable for the students admitted into II year B. Tech. (LES) from the Academic Year 2013-14 and onwards

1. **Eligibility for award of B. Tech. Degree (LES)**
  - I. The LES candidates shall pursue a course of study for not less than three academic years and not more than six academic years.
  - II. They shall be permitted to write the examinations for two more years after six academic years of course work.
2. The candidate shall register for 168 credits and secure 160 credits from II to IV year B.Tech. Program (LES) for the award of B.Tech. degree with compulsory subjects as listed in Table-1.

**Table 1: Compulsory Subjects**

Serial Number	Subject Particulars
1	All practical subjects
2	Industry oriented mini project
3	Comprehensive Viva-Voce
4	Seminar
5	Project work

3. The students, who fail to fulfil the requirement for the award of the degree in 8 consecutive academic years (6 years of study + 2 years additionally for appearing exams only) from the year of admission, shall forfeit their seats.
4. The attendance regulations of B. Tech. (Regular) shall be applicable to B.Tech. (LES).
5. **Promotion Rule**  
 A student shall be promoted from second year to third year if he fulfills the minimum attendance requirement.  
 A student shall be promoted from III year to IV year only if he fulfills the academic requirements of 34 credits up to III year I semester from all the examinations, whether or not the candidate takes the examinations.
6. **Award of Class**  
 After a student has satisfied the requirement prescribed for the completion of the program and is eligible for the award of B. Tech. Degree, he shall be placed in one of the following four classes:



Class Awarded	% of marks to be secured	From the aggregate marks secured from 216 Credits.
First Class with Distinction	70% and above	
First Class	Below 70 but not less than 60%	
Second Class	Below 60% but not less than 50%	
Pass Class	Below 50% but not less than 40%	

The marks obtained in the internal evaluation and the end semester examination shall be shown separately in the marks memorandum.

7. All the other regulations as applicable to **B. Tech. 4-year degree course (Regular)** will hold good for **B. Tech. (Lateral Entry Scheme)**.

#### MALPRACTICES RULES

##### DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/ Improper conduct	Punishment
	<i>If the candidate:</i>	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.

2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester/year. The Hall Ticket of the candidate is to be cancelled and sent to the University.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.

4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the Chief Superintendent/Assistant – Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The candidates also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is

	any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
8.	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work

		and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat.
9.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the College will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical

12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award suitable punishment.	
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**Malpractices identified by squad or special invigilators**

1. Punishments to the candidates as per the above guidelines.
2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
  - (i) A show cause notice shall be issued to the college.
  - (ii) Impose a suitable fine on the college.
  - (iii) Shifting the examination centre from the college to another college for a specific period of not less than one year.



Principal  
Jyoti Institute of Engg. & Tech for Women  
Edulabad, Ghatkesar (Mdr),  
Medchal Dist-501 301

Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Arutla Madhunika** bearing the **Reg. No.17RP1A0502** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Artificial Intelligence"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

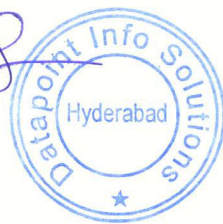
This is to certify that **Ms. Akkati Thapasvi** bearing the **Reg. No.17RP1A0501** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Artificial Intelligence"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

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For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR





Date: 21.04.2021

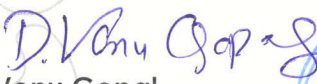
TO WHOM IT MAY CONCERN

This is to certify that **Ms. B. Kavitha** bearing the **Reg. No.17RP1A0503** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Artificial Intelligence"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad.**

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

**TO WHOM IT MAY CONCERN**

This is to certify that **Ms. Byreddy Meghana** bearing the **Reg. No.17RP1A0508** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Artificial Intelligence"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

*D. Venu Gopal*  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

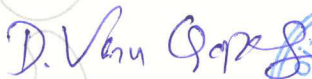
TO WHOM IT MAY CONCERN

This is to certify that **Ms.Balne Prasanna** bearing the **Reg. No.17RP1A0504** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Artificial Intelligence"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.Chakinarapu Sucharitha** bearing the **Reg. No.17RP1A0509** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **“Artificial Intelligence”** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.Dasari Jahnvi** bearing the **Reg. No.17RP1A0510** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Data Science"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

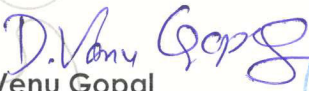
TO WHOM IT MAY CONCERN

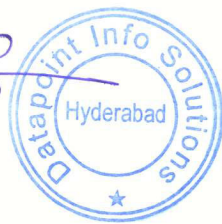
This is to certify that **Ms. Gurram Sreeja** bearing the **Reg. No.18RP5A0502** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Python"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021


TO WHOM IT MAY CONCERN

This is to certify that **Ms. G. Swathi** bearing the **Reg. No.17RP1A0512** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Data Science**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

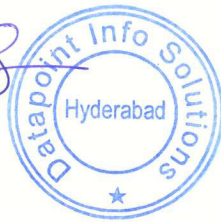
This is to certify that **Ms. I. Yashodha Laxmi** bearing the **Reg. No.17RP1A0513** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Data Science"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR





Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.Jampala Manisha** bearing the **Reg. No.18RP5A0503** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on “Python” from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.Kotagiri Anjali** bearing the **Reg. No.17RP1A0521** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Data Science**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.K Bhavitha** bearing the **Reg. No.17RP1A0515** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Data Science**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Kavati Deepthi** bearing the **Reg. No.17RP1A0519** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Data Science**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. K Dheekshitha** bearing the **Reg. No.17RP1A0516** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Data Science**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.Kalluri Mounika** bearing the **Reg. No.17RP1A0517** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Data Science"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

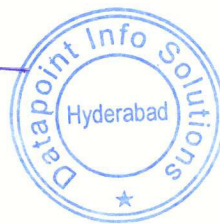
We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,



**D.Venu Gopal**  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.Laxmipuram Seema** bearing the **Reg. No.17RP1A0522** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Machine Learning"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Mamidi Baby Rani** bearing the **Reg. No.17RP1A0524** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Machine Learning**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR





Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Ratnapuram Likitha** bearing the **Reg. No.17RP1A0529** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Machine Learning**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Redimalla Snehalatha** bearing the **Reg. No.17RP1A0530** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Machine Learning**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

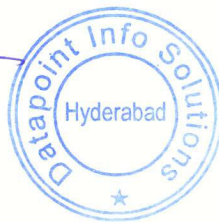
This is to certify that **Ms.Radabothu Swapna** bearing the **Reg. No.17RP1A0528** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on "**Machine Learning**" from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Sabhani Gayatri** bearing the **Reg. No.18RP5A0507** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Python"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

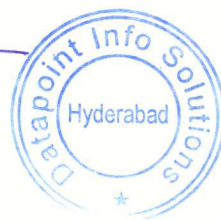
This is to certify that **Ms.Salaka Mani Sai Venkatalaxmi Meghana** bearing the **Reg. No.17RP1A0532** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Machine Learning"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

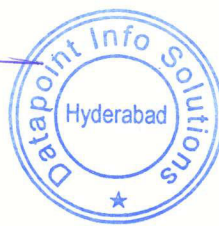
This is to certify that **Ms. Singireddy Sai Sruthi** bearing the **Reg. No.17RP1A0536** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Python"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Tirunahari Prathima** bearing the **Reg. No.17RP1A0541** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Python"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR



Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Uppunoothula Nagma** bearing the **Reg. No. 17BE1A0572** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Artificial Intelligence"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR





Date: 21.04.2021

TO WHOM IT MAY CONCERN

This is to certify that **Ms.Yadlapalli Sai Durga** bearing the **Reg. No.17RP1A0543** pursuing her Bachelors in Computer Science Engineering at **Megha Institute of Engineering and Technology for Women, Ghatkesar (Edulabad)**. She has successfully completed the Internship on **"Python"** from **22<sup>nd</sup> March, 2021** to **21<sup>st</sup> April, 2021** at **Datapoint Info Solutions, Hyderabad**.

We found her sincere, hardworking, technically sound and result oriented. She worked well during her tenure.

We take this opportunity to wish her all the best for her future.

For Datapoint Info Solutions.,

  
D.Venu Gopal  
Manager-HR





## Certificate

This is to certify that **JAKKA SRIJA** with Roll No: **17RP1A0417**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their Industrial INTERNSHIP Training with us on “**SMART TROLLEY USING MICROCONTROLLER**” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For CONSCIENCE TECHNOLOGIES



Project Manager

K.V. REDDY





## Certificate

This is to certify that **ERROLLA NIHARIKA** with Roll No: **17RP1A0413**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on **“DTMF BASED HOME DEVICES CONTROL SYSTEM”** the partial fulfillment of the award of **“Bachelor of Technology in E.C.E”** during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**





## Certificate

This is to certify that **JILUKARA SHWETHA** with Roll No: **17RP1A0418**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**AUTOMATIC OBSTACLE AVOIDANCE ROBOT**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**



Project Manager

**K.V. REDDY**





## Certificate

This is to certify that **BADDAM PRIYANKA** with Roll No: **17RP1A0407**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**EMBEDDED SYSTEM BASED VEHICLE SPEED CONTROL SYSTEM USING WIRELESS RF TECHNOLOGY**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

Project Manager

**K.V. REDDY**



## Certificate

This is to certify that **BEESAM HANVITA** with Roll No: **17RP1A0409**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**AUTOMATIC TOLLGATE COLLECTION SYSTEM**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

Project Manager

**K.V. REDDY**





## Certificate

This is to certify that **CHERUKURI MANICHANDANA** with Roll No: **17RP1A0411**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**RFID BASED ELECTRONIC HEALTH CARD**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**





## Certificate

This is to certify that **DACHARAJU HARITHA** with Roll No: **17RP1A0412**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**MONITORING ENVIRONMENTAL POLLUTION USING SENSORS**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

Project Manager

**K.V. REDDY**







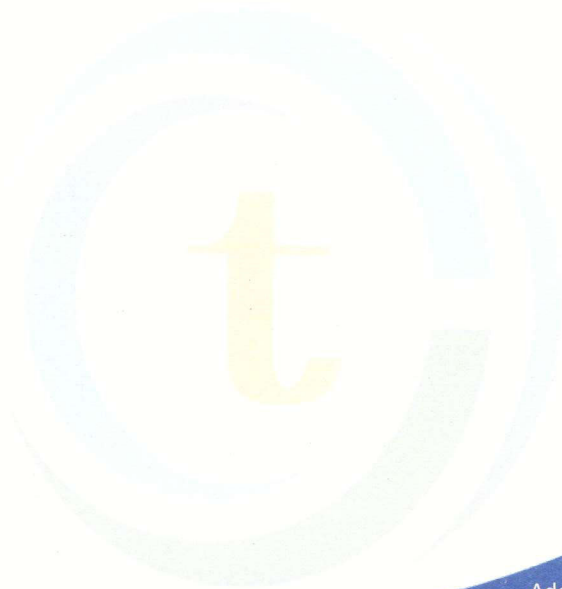
## Certificate

This is to certify that **ABBADIWAR TEJA SRI** with Roll No: **17RP1A0401**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their “**INTERNSHIP**” Training with us on “**ZIGBEE BASED REMOTE MONITORING OF TEMPERATURE AND RELATIVE HUMIDITY**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

Project Manager

**K.V. REDDY**





## Certificate

This is to certify that **APPIDI SRAVANI** with Roll No: **17RP1A0404**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**DOORBELL CUM VISITOR INDICATOR**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

Project Manager

**K.V. REDDY**





## Certificate

This is to certify that **B SAAHITHI** with Roll No: **17RP1A0405**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**ATM BATTERY CHARGER WITH COIN**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

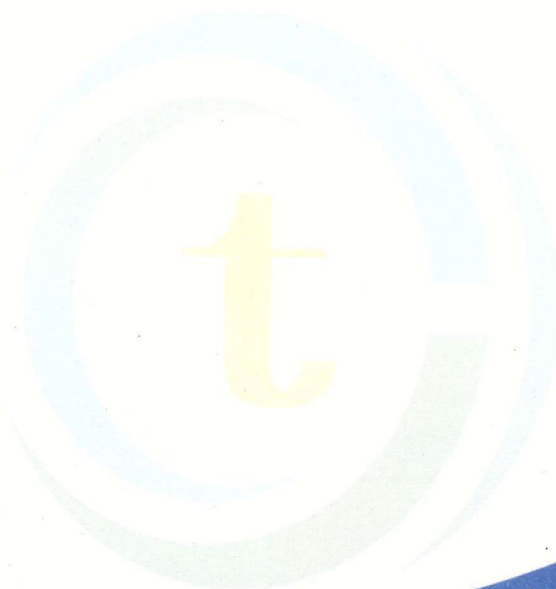




## Certificate

This is to certify that **B TEJASWANI** with Roll No: 17RP1A0406, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**ULTRASONIC RANGE FINDER RADAR USING ARDUINO AND PC**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of 17<sup>th</sup> **MARCH 2021** to 16<sup>th</sup> **April 2021**.

For **CONSCIENCE TECHNOLOGIES**





## Certificate

This is to certify that **K POOJITHA** with Roll No: **17RP1A0419**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on "**FOURTH GENERATION VOTING SYSTEM**" the partial fulfillment of the award of "Bachelor of Technology in E.C.E" during the period of **17<sup>th</sup> MARCH 2021** to **16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

Project Manager



**K.V. REDDY**





## Certificate

This is to certify that **K LIKITHA** with Roll No: **17RP1A0421**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**DESIGNING OF SMART AND SECURE SINGLE ATM CARD FOR MULTIPLE BANK ACCOUNTS**” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**

Project Manager

**K.V. REDDY**





## Certificate

This is to certify that **K APARNA** with Roll No: **17RP1A0423**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**ADVANCED ANDROID MOBILE CONTROLLING ROBOT**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For **CONSCIENCE TECHNOLOGIES**





# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that MADHIRA SHILPA with Roll No: 17RP1A0430, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “AUTOMATIC FIRE DETECTION AND ALERT SYSTEM” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES







# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that MACHI REDDY JAHANAVI with Roll No: 17RP1A0429, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “ELECTRICAL DEVICES CONTROL THROUGH VOICE” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES





# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that **K SAI POOJITHA** with Roll No: **17RP1A0424**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**AGRICULTURE FIELD MOTOR CONTROL SYSTEM USING GSM**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For VANTAGE TECHNOLOGIES

Project Manager



**B.V.K. REDDY**



# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that V RUCHITHA with Roll No: 18RP5A0408, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “AUTOMATIC HAND SANITIZER SPRAYING DEVICE” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES





# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that UDURUKOTA SHRUTHI with Roll No: 18RP5A0407, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “SMART WASTE COLLECTION MONITORING AND ALERT SYSTEM” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES





# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that RAJARAJESHWARI YADLAPALLI with Roll No: 18RP5A0406, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “PIR SENSOR BASED SECURITY SYSTEM” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES






# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that **PILLAMARI NAMRATHA** with Roll No: **18RP5A0405**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**AUTOMATIC COFFEE FILLING SYSTEM**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For VANTAGE TECHNOLOGIES

Project Manager

  
**B.V.K. REDDY**





# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that VATTI SUDHISHNA with Roll No: 17RP1A0441, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “AUTO CAR PARKING SYSTEM” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES

Project Manager

B.V.K. REDDY





# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that SAMA BHARGAVI with Roll No: 17RP1A0437, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “RFID BASED RATION DISTRIBUTION SYSTEM” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES

Project Manager

B.V.K. REDDY







# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that MUSKU SAMATHA with Roll No: 17RP1A0434, a student of MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR Studying B.Tech (ECE) final year along with her completed their INTERNSHIP Training with us on “RFID BASED SHOPPING TROLLEY” the partial fulfillment of the award of “Bachelor of Technology in E.C.E” during the period of 17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021.

For VANTAGE TECHNOLOGIES

Project Manager



B.V.K. REDDY



# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that **MARRI SHIREESHA** with Roll No: **17RP1A0432**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP** Training with us on “**PASSWORD PROTECTED GSM BASED LOCKER CONTROL**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For VANTAGE TECHNOLOGIES

Project Manager

B.V.K. REDDY





# VANTAGE TECHNOLOGIES

## Certificate

This is to certify that **DARPALLY MANASA** with Roll No: **17RP1A0431**, a student of **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, GHATKESAR** Studying **B.Tech (ECE)** final year along with her completed their **INTERNSHIP Training** with us on “**WEATHER MONITORING SYSTEM IN REMOTE PLACES**” the partial fulfillment of the award of “**Bachelor of Technology in E.C.E**” during the period of **17<sup>th</sup> MARCH 2021 to 16<sup>th</sup> April 2021**.

For VANTAGE TECHNOLOGIES

Project Manager

  
B.V.K. REDDY





**DEPARTMENT OF ELECTRICAL AND ELECTRONICS  
ENGINEERING**

**CERTIFICATE**

This is to certify that the Project entitled "**POWER QUALITY ENHANCEMENT FORA GRID CONNECTED TURBINE ENERGY SYSTEM**" being submitted by PRIYANKA SHASTRI(17RP1A0204), B.GOUTHAMI (18RP5A0203), M.PAVITHRA (18RP5A0208), in partial fulfilment of the requirements for the award of the degree of bachelor of Technology in Electrical and Electronics Engineering of Jawaharlal Nehru Technological University, Hyderabad during the Academic year 2017-2021 is a bonafide work carried out under our guidance and supervision.

The results embodied in this report have not been submitted to any other University or Institution for the award of any other degree or diploma.

**INTERNAL GUIDE**

**Mr.M.SUDHEER BABU**

**M.TECH, Asst.Professor**

**HOD-EEE**

**G.SANTOSHKUMAR**

**M.TECH, Asst.Professor**

**EXTERNAL EXAMINER**

**PRINCIPAL**

**Dr. M.VENUGOPAL**

**(Research and  
Development)**

Principal  
Megha Inst. of Engg. & Tech for Women  
Edulabad, Ghatkesar (MdI),  
Medchal Dist-501 301

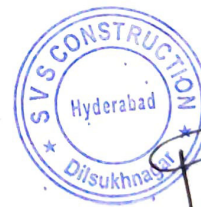


**SVS  
CONSTRUCTION**

## **CERTIFICATE**

This is to certify that Mr./Mrs. **M APARNA** Holding Roll no **18RP50108** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory**

**(Managing Director)**

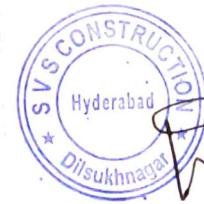


**SVS  
CONSTRUCTION**

## **CERTIFICATE**

This is to certify that Mr./Mrs. **G MEENAKSHI** Holding Roll no **18RP5A0104** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory**

**(Managing Director)**

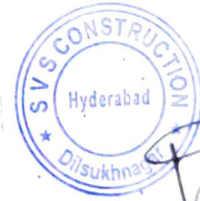


SVS  
CONSTRUCTION

## CERTIFICATE

This is to certify that Mr./Mrs. **EGGE RAVALIKA** Holding Roll no **18RP5A0102** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory**

**(Managing Director)**

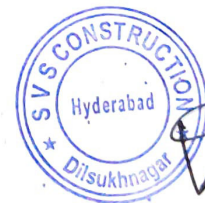


**SVS  
CONSTRUCTION**

## **CERTIFICATE**

This is to certify that Mr./Mrs. **KOPPU GAYATHRI** Holding Roll no **18RP5A0107** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory**

**(Managing Director)**



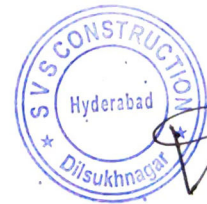


**SVS  
CONSTRUCTION**

## **CERTIFICATE**

This is to certify that Mr./Mrs. **POTHUGANTI RACHANA** Holding Roll no **18RP5A0113** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory**

**(Managing Director)**

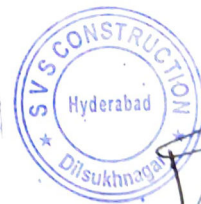


**SVS  
CONSTRUCTION**

## **CERTIFICATE**

This is to certify that Mr./Mrs. **J JAYASRI RAGA NAVYA** Holding Roll no **18RP5A0105** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory**

**(Managing Director)**



SVS  
CONSTRUCTION

## CERTIFICATE

This is to certify that Mr./Mrs. **P PRIYANKA** Holding Roll no **18RP5A0111** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory**

**(Managing Director)**

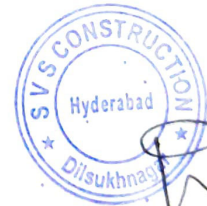


SVS  
CONSTRUCTION

## CERTIFICATE

This is to certify that Mr./Mrs. **RAYAWALASA PRIYANKA** Holding Roll no **18RP5A0114** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



Authorized signatory

(Managing Director)

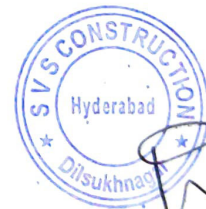


**SVS  
CONSTRUCTION**

## **CERTIFICATE**

This is to certify that Mr./Mrs. **PRATHYAKSHA POOSA** Holding Roll no **18RP5A0112** student of **CIVIL ENGINEERING** from **MEGHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN** has successfully completed his/her One Month (from **20<sup>th</sup> MARCH 2021** to **20<sup>th</sup> APRIL 2021**) internship program on Analysis of Surveying at **SVS CONSTRUCTION PVT LTD, Chaitanyapuri, HYD.** During the period of his/her internship program with us he/she was found Good and hardworking.

We wish him all the best for his future endeavors.



**Authorized signatory  
(Managing Director)**