



# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous)

## Department of CIVIL ENGINEERING

### I SEMESTER


S. No	Course Code	Course Title	L	T	P	Credits
1	A11BS1	Mathematics-I	3	1	0	3
2	A11BS2	Mathematics-II	4	1	0	4
3	A11BS3	Engineering Physics	3	0	0	3
4	A11ES4	Computer Programming in C	3	0	0	3
5	A11ES5	Engineering Mechanics	3	0	0	3
6	A11ES6	Engineering Graphics	2	0	4	4
7	A11BS7	Engineering Physics Lab	0	0	3	2
8	A11ES8	Computer Programming in C Lab	0	0	3	2
9	AMC01	NSS	0	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>10</b>	<b>24</b>

### II SEMESTER

S.No	Course Code	Course Title	L	T	P	Credits
1	A12BS1	Applied Physics	3	0	0	3
2	A12BS2	Engineering Chemistry	4	0	0	4
3	A12BS3	Mathematics-III	4	1	0	4
4	A12HS4	Professional Communication in English	3	0	0	3
5	A12ES5	Basic Electrical & Electronics Engineering	4	0	0	4
6	A12BS6	Engineering Chemistry Lab	0	0	3	2
7	A12HS7	English Language Communication Skills Lab	0	0	3	2
8	A12ES8	Engineering Workshop	0	0	3	2
9	AMC02	NCC	0	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>1</b>	<b>9</b>	<b>24</b>

  
DEAN ACADEMICS  
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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.TECH. CIVIL ENGINEERING**

**COURSE STRUCTURE & SYLLABUS (2016-17)**

**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 Material, 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 Design – I 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 - II Lab	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>

**\*Satisfactory/ Unsatisfactory**

  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**01**

**CIVIL 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.**

  
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**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>

  
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## 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**

  
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**T K R COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**B.TECH. ELECTRICAL & ELECTRONICS ENGINEERING**

**I Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A21BS1	Mathematics-I	3	1	0	3
2	A21BS2	Engineering Chemistry	4	0	0	4
3	A21BS3	Engineering Physics-I	3	0	0	3
4	A21HS4	Professional Communication in English	3	0	0	3
5	A21ES5	Engineering Mechanics	3	0	0	3
6	A21ES6	Basic Electrical and Electronics Engineering	4	0	0	4
7	A21HS7	English Language Communication Skills Lab	0	0	3	2
8	A21ES8	Engineering Workshop	0	0	3	2
9	AMC01	NSS	0	0	0	0
		<b>Total</b>	<b>19</b>	<b>1</b>	<b>6</b>	<b>24</b>

**II Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A22BS1	Engineering Physic-II	3	1	0	3
2	A22BS2	Mathematics-II	4	1	0	4
3	A22BS3	Mathematics-III	4	1	0	4
4	A22ES4	Computer Programming in C	3	0	0	3
5	A22ES5	Engineering Graphics	2	0	4	4
6	A22BS6	Engineering Chemistry Lab	0	0	3	2
7	A22BS7	Engineering Physics Lab	0	0	3	2
8	A22ES8	Computer Programming Lab	0	0	3	2
9	AMC02	NCC/NSO	0	0	0	0
		<b>Total</b>	<b>16</b>	<b>3</b>	<b>13</b>	<b>24</b>

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**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>

  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**02**

**ELECTRICAL AND  
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**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>

  
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**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**

  
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**B.TECH. MECHANICAL ENGINEERING**

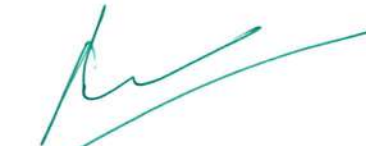
**I Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A31BS1	Mathematics-I	3	1	0	3
2	A31BS2	Mathematics-II	4	1	0	4
3	A31BS3	Engineering Physics	3	0	0	3
4	A31ES4	Computer Programming in C	3	0	0	3
5	A31ES5	Engineering Mechanics	3	0	0	3
6	A31ES6	Engineering Graphics	2	0	4	4
7	A31BS7	Engineering Physics Lab	0	0	3	2
8	A31ES8	Computer Programming in C Lab	0	0	3	2
9	AMC01	NSS	0	0	0	0
		<b>Total</b>	<b>21</b>	<b>2</b>	<b>10</b>	<b>24</b>

**II Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A32BS1	Applied Physics	3	1	0	3
2	A32BS2	Engineering Chemistry	4	1	0	4
3	A32BS3	Mathematics-III	4	1	0	4
4	A32HS4	Professional Communication in English	3	0	0	3
5	A32ES5	Basic Electrical & Electronics Engineering	2	0	4	4
6	A32BS6	Engineering Chemistry Lab	0	0	3	2
7	A32HS7	English Communication Skills Lab	0	0	3	2
8	A32ES8	Engineering Workshop	0	0	3	2
9	AMC02	NCC/NSO	0	0	0	0
		<b>Total</b>	<b>16</b>	<b>3</b>	<b>13</b>	<b>24</b>

  
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**B.TECH. MECHANICAL ENGINEERING**

**COURSE STRUCTURE & SYLLABUS (2016-17)**

**II YEAR I SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA301BS	Mathematics - IV	4	1	0	4
2	ME304ES	Thermodynamics	4	1	0	4
3	ME302ES	Kinematics of Machinery	4	1	0	4
4	ME305ES	Metallurgy and Material Science	3	0	0	3
5	ME303ES	Mechanics of Solids	3	1	0	3
6	ME306ES	Fuels and Lubricants Lab	0	0	3	2
7	ME307ES	Mechanics of Solids Lab	0	0	3	2
8	ME308ES	Metallurgy and Material Science Lab	0	0	3	2
9	*MC300HS	Gender Sensitization Lab	0	0	3	0
		<b>Total Credits</b>	<b>18</b>	<b>4</b>	<b>12</b>	<b>24</b>

**II YEAR II SEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	ME403ES	Dynamics of Machinery	4	1	0	4
2	ME401ES	Fluid Mechanics and Hydraulic Machines	4	1	0	4
3	ME404ES	Machine Drawing	2	0	4	4
4	ME405ES	Manufacturing Process	3	0	0	3
5	SM405MS	Business Economic and Financial Analysis	3	0	0	3
6	ME406ES	Kinematics and Dynamics Lab	0	0	3	2
7	ME407ES	Fluid Mechanics and Hydraulic Machines Lab	0	0	3	2
8	ME408ES	Manufacturing Process Lab	0	0	3	2
9	*MC400ES	Environmental Science and Technology	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>2</b>	<b>15</b>	<b>24</b>

\*Satisfactory/Unsatisfactory

  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**03**

**MECHANICAL  
ENGINEERING**


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**II YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
A40312	Production Technology	4	-	4
A40309	Kinematics of Machinery	4	-	4
A40313	Thermal Engineering -I	4	-	4
A40112	Mechanics of Fluids and Hydraulic Machines	4	-	4
A40310	Machine Drawing	-	6	4
A40006	Mathematics-II	4	-	4
A40382	Production Technology Lab	-	3	2
A40188	Mechanics of Fluids & Hydraulic Machines Lab	-	3	2
	<b>Total</b>	<b>20</b>	<b>12</b>	<b>28</b>

**III YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A50010	Managerial Economics and Financial Analysis	4	-	4
A50318	Engineering Metrology	4	-	4
A50317	Dynamics of Machinery	4	-	4
A50321	Machine Tools	4	-	4
A50316	Design of Machine Members - I	4	-	4
A50326	Thermal Engineering -II	4	-	4
A50384	Machine Tools & Metrology Lab	-	3	2
A50383	Thermal Engineering 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
A62405	Automobile Engineering	4	-	4
A60330	Finite Element Methods	4	-	4
A60334	Refrigeration and Air Conditioning	4	-	4
A60329	Design of Machine Members - II	4	-	4
A60331	Heat Transfer	4	-	4
	<b>Open Elective</b>	4	-	4
A60117	Disaster Management			
A60017	Intellectual Property Rights			
A60018	Human Values and Professional Ethics			
A60387	Heat Transfer Lab	-	3	2
A60086	Advanced Communication Skills Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

  
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**IV YEAR I SEMESTER**

Code	Subject	L	T/P/D	C
A70352	Operations Research	4	-	4
A70353	Power Plant Engineering	4	-	4
A70328	CAD/CAM	4	-	4
A70343	Instrumentation and Control Systems	4	-	4
	<b>ELECTIVE – I</b>	4	-	4
A70355	Robotics			
A70346	Mechanical Vibrations			
A70348	Mechatronics			
A70347	Mechanics of Composite Materials			
A70332	Industrial Management			
	<b>ELECTIVE – II</b>	4	-	4
A70359	Unconventional Machining Processes			
A70337	CNC Technology			
A70336	Automation in Manufacturing			
A70339	Design for Manufacturing			
A72909	Nanotechnology			
A70390	Computer Aided Design & Manufacturing Lab	-	3	2
A70391	Production Drawing Practice and Instrumentation 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
A80366	Production Planning and Control	4	-	4
	<b>ELECTIVE – III</b>	4	-	4
A80527	Artificial Neural Networks			
A80367	Total Quality Management			
A80363	Maintenance and Safety Engineering			
A80365	Plant Layout & Material Handling			
	<b>ELECTIVE – IV</b>	4	-	4
A80324	Renewable Energy Sources			
A80362	Jet Propulsion & Rocket Engineering			
A80338	Computational Fluid Dynamics			
A80361	Gas Dynamics			
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

  
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**T K R COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**B.TECH. ELECTRONICS & COMMUNICATION ENGINEERING**

**I Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A41BS1	Mathematics-I	3	1	0	3
2	A41BS2	Engineering Chemistry	4	0	0	4
3	A41BS3	Engineering Physics-I	3	0	0	3
4	A41HS4	Professional Communication in English	3	0	0	3
5	A41ES5	Engineering Mechanics	3	0	0	3
6	A41ES6	Basic Electrical and Electronics Engineering	4	0	0	4
7	A41HS7	English Language Communication Skills Lab	0	0	3	2
8	A41ES8	Engineering Workshop	0	0	3	2
9	AMC01	NSS	0	0	0	0
		<b>Total</b>	<b>19</b>	<b>1</b>	<b>6</b>	<b>24</b>

**II Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A42BS1	Engineering Physic-II	3	1	0	3
2	A42BS2	Mathematics-II	4	1	0	4
3	A42BS3	Mathematics-III	4	1	0	4
4	A42ES4	Computer Programming in C	3	0	0	3
5	A42ES5	Engineering Graphics	2	0	4	4
6	A42BS6	Engineering Chemistry Lab	0	0	3	2
7	A42BS7	Engineering Physics Lab	0	0	3	2
8	A42ES8	Computer Programming in C Lab	0	0	3	2
9	AMC02	NCC/NSO	0	0	0	0
		<b>Total</b>	<b>16</b>	<b>3</b>	<b>13</b>	<b>24</b>



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.TECH. ELECTRONICS AND COMMUNICATION ENGINEERING**

**COURSE STRUCTURE & SYLLABUS (2016-17)**


**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>

  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**4**

**ELECTRONICS AND  
COMMUNICATION  
ENGINEERING**

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



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**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>



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## 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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**T K R COLLEGE OF ENGINEERING & TECHNOLOGY**  
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**B.TECH. COMPUTER SCIENCE & ENGINEERING**

**I Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A51BS1	Mathematics-I	3	1	0	3
2	A51BS2	Engineering Chemistry	4	0	0	4
3	A51BS3	Engineering Physics-I	3	0	0	3
4	A51HS4	Professional Communication in English	3	0	0	3
5	A51ES5	Engineering Mechanics	3	0	0	3
6	A51ES6	Basic Electrical and Electronics Engineering	4	0	0	4
7	A51HS7	English Language Communication Skills Lab	0	0	3	2
8	A51ES8	Engineering Workshop	0	0	3	2
9	AMC01	NSS	0	0	0	0
		<b>Total</b>	<b>19</b>	<b>1</b>	<b>6</b>	<b>24</b>

**II Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A52BS1	Engineering Physic-II	3	1	0	3
2	A52BS2	Mathematics-II	4	1	0	4
3	A52BS3	Mathematics-III	4	1	0	4
4	A52ES4	Computer Programming in C	3	0	0	3
5	A52ES5	Engineering Graphics	2	0	4	4
6	A52BS6	Engineering Chemistry Lab	0	0	3	2
7	A52BS7	Engineering Physics Lab	0	0	3	2
8	A52ES8	Computer Programming Lab	0	0	3	2
9	AMC02	NCC/NSO	0	0	0	0
		<b>Total</b>	<b>16</b>	<b>3</b>	<b>13</b>	<b>24</b>

  
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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.TECH. COMPUTER SCIENCE AND ENGINEERING**

**COURSE STRUCTURE & SYLLABUS (2016-17)**

**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>

\* Satisfactory/Unsatisfactory

  
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**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)**



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**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>

  
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## 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>			
A70540	Software Project Management			
A70532	Image processing and Pattern Recognition			
A70536	Mobile Computing			
A70529	Computer Graphics			
A70352	Operations Research			
	<b>ELECTIVE – II</b>			
A70534	Machine Learning	4	-	4
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>			
A80551	Web Services	4	-	4
A80538	Semantic Web and Social Networks			
A80537	Scripting Languages			
A80547	Multimedia & Rich Internet Applications			
	<b>ELECTIVE – IV</b>			
A80542	Ad hoc and Sensor Networks	4	-	4
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

  
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**T K R COLLEGE OF ENGINEERING & TECHNOLOGY**  
**(Autonomous)**  
**B.TECH. INFORMATION TECHNOLOGY**

**I Semester**


S.No.	Course Code	Course Title	L	T	P	Credit
1	A61BS1	Mathematics-I	3	1	0	3
2	A61BS2	Engineering Chemistry	4	0	0	4
3	A61BS3	Engineering Physics-I	3	0	0	3
4	A61HS4	Professional Communication in English	3	0	0	3
5	A61ES5	Engineering Mechanics	3	0	0	3
6	A61ES6	Basic Electrical and Electronics Engineering	4	0	0	4
7	A61HS7	English Language Communication Skills Lab	0	0	3	2
8	A61ES8	Engineering Workshop	0	0	3	2
9	AMC01	NSS	0	0	0	0
		<b>Total</b>	<b>19</b>	<b>1</b>	<b>6</b>	<b>24</b>

**II Semester**

S.No.	Course Code	Course Title	L	T	P	Credit
1	A62BS1	Engineering Physic-II	3	1	0	3
2	A62BS2	Mathematics-II	4	1	0	4
3	A62BS3	Mathematics-III	4	1	0	4
4	A62ES4	Computer Programming in C	3	0	0	3
5	A62ES5	Engineering Graphics	2	0	4	4
6	A62BS6	Engineering Chemistry Lab	0	0	3	2
7	A62BS7	Engineering Physics Lab	0	0	3	2
8	A62ES8	Computer Programming Lab	0	0	3	2
9	AMC02	NCC/NSO	0	0	0	0
		<b>Total</b>	<b>16</b>	<b>3</b>	<b>13</b>	<b>24</b>

  
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# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

## B.TECH. INFORMATION TECHNOLOGY

### COURSE STRUCTURE & SYLLABUS (2016-17)

#### 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>

\* Satisfactory/Unsatisfactory

  
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PRINCIPAL  
TKR College of Engineering & Technology  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**INFORMATION  
TECHNOLOGY / COMPUTER  
SCIENCE TECHNOLOGY**

**For  
B.TECH. FOUR YEAR DEGREE COURSE  
(Applicable for the batches admitted from 2014-15)  
(I - IV Years Syllabus)**



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

*Asmi*  
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*[Signature]*  
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**II YEAR II SEMESTER**

Code	Subject	L	T/P/D	C
	Principles of Programming Languages	4	-	4
	Database Management Systems	4	-	4
	Java Programming	4	-	4
	Environmental studies	4	-	4
	Data Communication	4	-	4
	Design and Analysis of Algorithms	4	-	4
	Java Programming Lab	-	3	2
	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
	Automata and Compiler Design	4	-	4
	Linux Programming	4	-	4
	Software Engineering	4	-	4
	Operating Systems	4	-	4
	Computer Networks	4	-	4
	Managerial Economics and Financial Analysis	4	-	4
	Operating Systems Lab	-	3	2
	Computer Networks Lab (Through Linux)	-	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
	Web Technologies	4	-	4
	<b>OPEN ELECTIVE</b>	4	-	4
	Human Values and Professional Ethics			
	Intellectual Property Rights			
	Disaster Management			
	Object Oriented Analysis and Design	4	-	4
	Data Warehousing and Data Mining	4	-	4
	Software Testing Methodologies	4	-	4
	Cloud Computing	4	-	4
	Data Mining and Web Technologies Lab	-	3	2
	Advanced Communication Skills Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

  
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## IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Information Security	4	-	4
	Design Patterns	4	-	4
	Mobile Application Development	4	-	4
	Information Retrieval Systems	4	-	4
	<b>ELECTIVE – I</b> Wireless Networks and Mobile Computing Image Processing and Pattern Recognition Soft Computing Semantic Web and Social Networks Operations Research	4	-	4
	<b>ELECTIVE – II</b> Software Project Management Computer Graphics Human Computer Interaction Scripting Languages Computer Forensics	4	-	4
	Case Tools and Software Testing Lab	-	3	2
	Mobile Applications Development 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
	Management Science	4	-	4
	<b>ELECTIVE III</b> Web Services E – Commerce Middleware Technologies Ad hoc and Sensor Networks	4	-	4
	<b>ELECTIVE IV</b> Multimedia & Rich Internet Applications Artificial Intelligence Storage Area Networks Machine Learning	4	-	4
	Industry Oriented Mini Project	-	-	2
	Seminar	-	6	2
	Project Work	-	15	10
	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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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

## M.TECH (POWEELECTRONICS) COURSE STRUCTURE AND SYLLABUS

### IYear-I Semester

Category	CourseTitle	Int. marks	Ext. marks	L	P	C
CoreCourse I	Machine Modeling and Analysis	30	70	4	--	4
Core Course II	Modern Control Theory	30	70	4	--	4
Core Course III	PowerElectronicDevicesand Circuits	30	70	4	--	4
Core Electivel	1. Special Machines 2. HVDC Transmission 3. Programmable LogicControllers and their Applications	30	70	4	--	4
Core Electivell	1. Microcontrollers and Applications 2. Embedded Systems 3. DigitalControlSystems	30	70	4	--	4
Open Electivel	1. Optimization Techniques 2. Renewable energysystems 3. Solar energy and applications 4. Analysisofpowerconverters	30	70	4	--	4
LaboratoryI	PowerConvertersSimulationLab	30	70	--	4	2
SeminarI	Seminar-I	50	--	--	4	2
<b>Total Credits</b>				<b>24</b>	<b>8</b>	<b>28</b>

### IYear-II Semester

Category	CourseTitle	Int. marks	Ext. Marks	L	P	C
Core Course IV	PowerElectronicConverters	30	70	4	--	4
Core Course V	PowerElectronicControlofDC Drives	30	70	4	--	4
Core Course VI	PowerElectronicControlofAC Drives	30	70	4	--	4
Core ElectiveIII	1. PowerQuality 2. Advanced DigitalSignal Processing 3. SwitchedMode PowerSupplies(SMPS)	30	70	4	--	4
Core ElectiveIV	1. Flexible ACTransmission Systems 2. High-FrequencyMagneticComponents 3. DynamicsofElectricalMachines	30	70	4	--	4
Open Electivell	1. Smartgridtechnologies 2. AI Techniquesin Electrical Engineering 3. ReliabilityEngineering 4. EnergyAuditing, Conservation&Management	30	70	4	--	4
LaboratoryII	PowerConvertersand DrivesLab	30	70	--	4	2
SeminarII	Seminar-II	50	--	--	4	2
<b>Total Credits</b>				<b>24</b>	<b>8</b>	<b>28</b>


### IIYear-I Semester

CourseTitle	Int. marks	Ext. marks	L	P	C
ComprehensiveViva-Voce	--	100	--	--	4
ProjectworkReviewI	50	--	--	24	12
<b>Total Credits</b>			<b>--</b>	<b>24</b>	<b>16</b>

### IIYear- IISemester

CourseTitle	Int. marks	Ext. marks	L	P	C
ProjectworkReviewII	50	--	--	8	4
ProjectEvaluation(Viva-Voce)	--	150	--	16	12
<b>Total Credits</b>			<b>--</b>	<b>24</b>	<b>16</b>

  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**M.TECH  
POWER ELECTRONICS/POWER AND  
INDUSTRIAL DRIVES/POWER  
ELECTRONICS AND ELECTRIC DRIVES**

(Applicable for the batches admitted from 2013-14)



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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**M.TECH - POWER ELECTRONICS/POWER AND INDUSTRIAL DRIVES/**  
**POWER ELECTRONICS AND ELECTRIC DRIVES**  
**COURSE STRUCTURE AND SYLLABUS**

I Year I Semester					
Code	Group	Subject	L	P	Credits
		Machine Modeling and Analysis	3	-	3
		Power Electronic Converters-I	3	-	3
		Modern Control Theory	3	-	3
		Power Electronic Control of DC Drives	3	-	3
	Elective -I	HVDC Transmission Operations Research Embedded Systems	3	-	3
	Elective -II	Microcontrollers and Applications Programmable Logic Controllers and their Applications Special Machines	3	-	3
	Lab	Power Converters Lab	-	3	2
		Seminar	-	-	2
		Total Credits	18	3	22

## I Year II Semester

Code	Group	Subject	L	P	Credits
		Power Electronic Converters-II	3	-	3
		Power Electronic Control of AC Drives	3	-	3
		Flexible AC Transmission Systems (FACTS)	3	-	3
		Neural Networks and Fuzzy Systems	3	-	3
	Elective -III	Digital Control Systems Power Quality Advanced Digital Signal Processing	3	-	3
	Elective -IV	Dynamics of Electrical Machines High-Frequency Magnetic Components Renewable Energy Systems	3	-	3
	Lab	Electrical Systems Simulation Lab	-	3	2
		Seminar	-	-	2
		Total Credits	18	3	22

## II Year - I Semester


Code	Group	Subject	L	P	Credits
		Comprehensive Viva	-	-	2
		Project Seminar	0	3	2
		Project work	-	-	18
		Total Credits	-	3	22

## II Year - II Semester

Code	Group	Subject	L	P	Credits
		Project work and Seminar	-	-	22
		Total Credits	-	-	22

  
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**TKR COLLEGE OF ENGINEERING & TECHNOLOGY**  
(Autonomous)  
**M.TECH (COMPUTER SCIENCE AND ENGINEERING)**

**COURSE STRUCTURE**

**I Semester**

	Course Title	Int. marks	Ext. marks	L	P	C
A251PC1	Data Structures and Algorithms	30	70	4	--	4
A251PC2	Data Science	30	70	4	--	4
A251PC3	Distributed Systems	30	70	4	--	4
A251PE4	1. Information Security 2. Mobile Applications Development 3. Wireless Networks 4. Multimedia and Gaming	30	70	3	2	4
A251PE5	1. Machine Learning 2. Natural Language Processing 3. Design Patterns 4. Advanced Computer Architecture	30	70	3	2	4
A251OE6	Open Elective – 1	30	70	4	--	4
A251PC7	Software Lab-1	30	70	--	4	2
A251SE8	Seminar	50	--	--	4	2
	<b>Total Credits</b>			<b>24</b>	<b>8</b>	<b>28</b>

**II Semester**

	Course Title	Int. marks	Ext. marks	L	P	C
A252PC1	Network Programming	30	70	4	--	4
A252PC2	Mining with Big Data	30	70	4	--	4
A252PC3	Internet Technologies and Services	30	70	4	--	4
A252PE4	<b>Core Elective– 3</b> 1. Cyber Security 2. Advanced Databases 3. Social Network Analysis 4. Cloud Computing	30	70	3	2	4
A252PE5	<b>Core Elective– 4</b> 1. Deep Learning 2. Internet of Things 3. Service Oriented Computing 4. Distributed Computing	30	70	3	2	4
A252OE6	<b>Open Elective – 2</b>	30	70	4	--	4
A252PC7	Software Lab-2	30	70	--	4	2
A252SE8	Seminar	50	--	--	4	2
	<b>Total Credits</b>			<b>24</b>	<b>8</b>	<b>28</b>

**Note: In core elective courses two practical hours to be conducted for every week and implement the concepts discussed in theory hours.**

  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**M.TECH  
COMPUTER SCIENCE  
ENGINEERING**

(Applicable for the batches admitted from 2013-14)



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD  
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## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

## M.TECH - COMPUTER SCIENCE ENGINEERING

## COURSE STRUCTURE AND SYLLABUS

## I Year I Semester

Code	Group	Subject	L	P	Credits
		Advanced Data Structures and Algorithms	3	-	3
		Computer System Design	3	-	3
		Advanced Operating Systems	3	-	3
		Distributed Systems	3	-	3
	Elective -I	Software Process and Project Management Natural Language Processing Pattern Recognition	3	-	3
	Elective -II	Machine Learning Parallel and Distributed Algorithms Software Architecture and Design Patterns	3	-	3
	Lab	Advanced Data Structures and Algorithms Lab	-	3	2
		Seminar	-	-	2
		Total Credits	18	3	22

## I Year II Semester

Code	Group	Subject	L	P	Credits
		Advanced Network Programming	3	-	3
		Advanced Databases	3	-	3
		Web Services and Service Oriented Architecture	3	-	3
		Grid and Cloud Computing	3	-	3
	Elective -III	Advanced Data Mining Storage Area Networks Database Security	3	-	3
	Elective -IV	Semantic Web and Social Networks Wireless Networks and Mobile Computing Information Retrieval Systems	3	-	3
	Lab	Web Services Lab	-	3	2
		Seminar	-	-	2
		Total Credits	18	3	22

## II Year - I Semester

Code	Group	Subject	L	P	Credits
		Comprehensive Viva	-	-	2
		Project Seminar	0	3	2
		Project work	-	-	18
		Total Credits	-	3	22

## II Year - II Semester

Code	Group	Subject	L	P	Credits
		Project work and Seminar	-	-	22
		Total Credits	-	-	22

  
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**TKR COLLEGE OF ENGINEERING & TECHNOLOGY**  
**(Autonomous)**  
**MASTER OF BUSINESS ADMINISTRATION (MBA) R17**  
**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
A141PC1	Management and Organisational Behaviour	30	70	3	1	0	4
A141PC2	Business Economics	30	70	3	1	0	4
A141PC3	Financial Accounting & Analysis	30	70	3	1	0	4
A141PC4	Business Statistics	30	70	3	1	0	4
A141PC5	Business Law and Ethics	30	70	3	1	0	4
A141OE6	A141OE6A: Business Research Methodology A141OE6B: Project Management A141OE6C: Technology Management A141OE6D: Rural Marketing	30	70	3	0	0	3
A141PC7	Business Communication -Lab	100	-	0	0	3	2
	<b>TOTAL</b>	<b>280</b>	<b>420</b>	<b>18</b>	<b>5</b>	<b>3</b>	<b>25</b>

**II Semester**

Course Code	Course title	Int. marks	Ext. marks	L	T	P	C
A142PC1	Human Resource Management	30	70	3	1	0	4
A142PC2	Marketing Management	30	70	3	1	0	4
A142PC3	Financial Management	30	70	3	1	0	4
A142PC4	Quantitative Analysis for Business Decisions	30	70	3	1	0	4
A142PC5	Entrepreneurship	30	70	3	1	0	4
A142OE6	A142OE6A: Total Quality Management A142OE6B: Corporate Governance A142OE6C: International Business A142OE6D: Supply Chain Management	30	70	3	0	0	3
A142PC7	Summer Internship	100			0	3	2
	<b>TOTAL</b>	<b>280</b>	<b>420</b>	<b>18</b>	<b>5</b>	<b>3</b>	<b>25</b>

  
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**ACADEMIC REGULATIONS  
COURSE STRUCTURE  
AND  
DETAILED SYLLABUS**

**MASTER OF BUSINESS  
ADMINISTRATION**

**TWO YEAR DEGREE COURSE**  
(Applicable for the batches admitted from 2013-2014)



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

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## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD.

## MASTER OF BUSINESS ADMINISTRATION (MBA)

## COURSE STRUCTURE AND SYLLABUS

## I SEMESTER

Code	Subjects	Approach	Credits	Marks
13MBA01	Management Fundamentals	Concepts and Cases	3	100
13MBA02	Business Laws & Regulations	Concepts and Cases	3	100
13MBA03	Financial Accounting & Analysis	Concepts & Problem Solving	3	100
13MBA04	Managerial Economics	Concepts and Cases	3	100
13MBA05	Business Environment	Concepts and Cases	3	100
13MBA06	Research Methodology & Statistical Analysis	Concepts & Problem Solving	3	100
13MBA07	Statistical Data Analysis - <b>Practical</b>	MS Excel(LAB)	2	100
13MBA08	Business Communication- <b>Practical</b>	LAB Practice	2	100


## II SEMESTER

13MBA09	Human Resource Management	Concepts and Cases	3	100
13MBA10	Quantitative Analysis for Business Decisions	Concepts & Problem Solving	3	100
13MBA11	Financial Management	Concepts Cases & Problem Solving	3	100
13MBA12	Management Information system	Concepts and Cases	3	100
13MBA13	Marketing Management	Concepts and Cases	3	100
13MBA14	Business Ethics & Corporate Governance	Concepts and Cases	3	100
13MBA15	Personal Effectiveness - <b>Seminar</b>	Presentations, Group Discussions, Mock interviews in the class.	2	50
13MBA16	Annual Report Analysis - <b>Seminar</b>	Using CMIE Prowess Database/ Annual reports of companies & MS-Excel	2	50

## III SEMESTER

13 MBA 17	Summer Internship- <b>Seminar</b>	Working in any organization during summer vacation	2	50
13MBA18	Production & Operation Management	Concepts, Cases & Problem Solving	3	100
13MBA19	Strategic Management	Concepts and Cases	3	100
13MBA20	Organizational Behaviour	Concepts and Cases	3	100
13MBA21	Business Best Practices – <b>Seminar</b>	Internet & Interaction with Executives	2	50
	Elective 1	Concepts and Cases	3	100
	Elective 2	Concepts and Cases	3	100
	Elective 3	Concepts and Cases	3	100

  
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IV SEMESTER

13MBA22	Entrepreneurship	Concepts and Cases	3	100
	Elective 4	Concepts and Cases	3	100
	Elective 5	Concepts and Cases	3	100
	Elective 6	Concepts and Cases	3	100
13MBA23	Success Story of an Entrepreneur- Seminar	Field Visit	2	50
<b>Main Project Work</b>				
13MBA24	<b>Stage-I:</b> Research Methodology for the Main Project Work & Collection of Main Project Related Data from CMIE Prowess DATABASE or any source, or Data collected from the field- Seminar		2	50
13MBA25	<b>Stage-II :</b> Statistical Analysis of Main project data using either Excel, SPSS, MINI TAB, or R- Seminar Presentation		2	50
13MBA26	<b>Stage-III: MAIN PROJECT REPORT &amp; VIVA</b>		4	GRADE
<b>TOTAL CREDITS = 66 CREDITS FOR 19 THEORY SUBJECTS + 4 CREDITS FOR 2 PRACTICALS, 18 CREDITS FOR SEMINARS AND PROJECT WORK.</b>			<b>88</b>	<b>2750</b>

CHOOSE ANY ONE OF THE MARKETING OR FINANCE OR HR OR SYSTEMS ELECTIVES

MARKETING ELECTIVES				
13MBA27	Consumer Behaviour	Concepts and Cases	3	100
13MBA28	Sales and Distribution	Concepts and Cases	3	100
13MBA29	Integrated Marketing Communications	Concepts and Cases	3	100
13MBA30	Retailing Management	Concepts and Cases	3	100
13MBA31	Services Marketing	Concepts and Cases	3	100
13MBA32	International Marketing	Concepts and Cases	3	100
FINANCE ELECTIVES				
13MBA33	Cost & Management Accounting	Concepts & Problem Solving	3	100
13MBA34	Security Analysis and Portfolio Management	Concepts & Problem Solving	3	100
13MBA35	Financial Institutions, Markets & Services	Concepts & Problem Solving	3	100
13MBA36	Strategic Investment and Financing Decisions	Concepts & Problem Solving	3	100
13MBA37	International Financial Management	Concepts & Problem Solving	3	100
13MBA38	Financial Derivatives	Concepts & Problem Solving	3	100
HR ELECTIVES				
13MBA39	Performance Management	Concepts and Cases	3	100
13MBA40	Training and Development	Concepts and Cases	3	100
13MBA41	Management of Industrial Relations	Concepts and Cases	3	100
13MBA42	Compensation & Reward Management	Concepts and Cases	3	100
13MBA43	Management of Change	Concepts and Cases	3	100
13MBA44	Leadership	Concepts and Cases	3	100
SYSTEMS ELECTIVES				
13MBA45	Business Intelligence	Concepts and Cases	3	100
13MBA46	Enterprise Resource Planning	Concepts and Cases	3	100
13MBA47	Decision Support System	Concepts and Cases	3	100
13MBA48	E-Business	Concepts and Cases	3	100
13MBA49	Cyber Security	Concepts and Cases	3	100
13MBA50	Information System Control and Audit	Concepts and Cases	3	100

  
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