



# Vidya Jyothi Institute of Technology

(An Autonomous Institution)

(Accredited by NAAC & NBA, Approved by AICTE New Delhi & Permanently Affiliated to JNTUH) Aziznagar Gate, C.B. Post, Hyderabad-500 075

Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum-R15

## a. CIVIL ENGINEERING

### II YEAR I SEMESTER

S.No	Code	Subject	L	T	P/D	Credits
1	A13013	Numerical Methods	3	1	0	3
2	A13101	Engineering Geology	3	0	0	3
3	A13102	Strength of Materials – I	3	1	0	4
4	A13103	Surveying	3	1	0	4
5	A13011	Environmental Science	3	0	0	3
6	A13307	Fluid Mechanics	3	1	0	3
7	A13181	Survey Lab	0	0	3	2
8	A13182	Engineering Geology Lab	0	0	3	2
	MC-I	Mandatory course – I	2	0	0	0
			<b>20</b>	<b>4</b>	<b>6</b>	<b>24</b>

### II YEAR II SEMESTER

S.No	Code	Subject	L	T	P/D	Credits
1	A14015	Probability and Statistics	3	1	0	3
2	A14104	Structural Analysis – I	3	1	0	4
3	A14105	Strength of Materials – II	3	1	0	3
4	A14106	Concrete Technology	3	0	0	3
5	A14107	Hydraulics & Hydraulic Machinery	3	1	0	4
6	A14108	Building Materials, Construction and Planning	3	0	0	3
7	A14183	Survey Lab II	0	0	3	2
8	A14184	Strength of Materials Lab	0	0	3	2
	MC-II	Mandatory Course – II	2	0	0	0
			<b>20</b>	<b>4</b>	<b>6</b>	<b>24</b>

MC-I Mandatory course – I- i) Intellectual property rights and cyber laws

ii) Professional Ethics Human values and self development

MC-II Mandatory course – II- i) Professional communications

ii) Disaster Management

### III YEAR I SEMESTER

S.No.	Code	Subject	L	T	P/D	Credits
1	A15017	Managerial Economics and Financial Analysis	3	0	0	3
2	A15109	Design of Reinforced Concrete Structures	3	1	0	3
3	A15110	Geotechnical Engineering	3	1	0	3
4	A15111	Water resources engineering -I	3	1	0	3
5	Professional Electives	A15112 - Indeterminate Structural Analysis A15113 - Groundwater Hydrology A15114 - Rock Mechanics	3	0	0	3
6		<b>Open Elective 1</b>	3	0	0	3
7	A15185	Geotechnical Engineering Laboratory	0	0	3	2
8	A15186	Fluid Mechanics And Hydraulic Machinery Laboratory	0	0	3	2
9	A15TP-I	Personality Development & Behaviour Skills	0	0	3	2
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>9</b>	<b>24</b>

**Note:** Open Elective 1- Offered by the Civil engineering department for other branches Except Mechanical Engineering

#### Open Elective 1 :

- Remote Sensing And GIS (A15115)
- Smart City (A15116)

### III YEAR II SEMESTER

S.No.	Code	Subject	L	T	P/D	Credits
1	A16018	Environmental Engineering	3	1	0	3
2	A16118	Steel Structure Design and Drawing	3	1	0	3
3	A16119	Highway Engineering	3	0	0	3
4	A16120	Foundation Engineering	3	1	0	3
5	Professional Electives	A16121 - Ground improvement Techniques A16122 - Earthquake Engineering A16123- Building, Planning, Design and Drawing	3	0	0	3
6		<b>Open Elective - 2</b>	3	0	0	3
7	A16187	Computer Aided Drafting of Building Lab	0	0	3	2
8	A16188	Advance English Communication Skills Lab	0	0	3	2
9	A16TP-II	Quantitative Methods & Logical Reasoning	0	0	3	2
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>9</b>	<b>24</b>

**Note:** Open Elective -2: Offered by the Civil engineering department for other branches Except Mechanical Engineering

#### Open Elective 2 :

- Environmental Pollution and Control Methods (A16124)
- Green Building Technologies (A16125)

## b. ELECTRICAL ANDELECTRONICSENGINEERING

### II YEAR I SEMESTER

S.No.	Course Code	CourseTitle	L	T	P/D	Credits
1	A13012	Mathematics-IV	3	1	0	3
2	A13401	ElectronicDevices&Circuits	3	1	0	3
3	A13204	NetworkTheory	4	1	0	4
4	A13205	ElectroMagneticFields	4	1	0	4
5	A13206	ElectricalMachines-I	4	1	0	4
6	A13011	EnvironmentalScience	2	1	0	2
7	A13281	BasicSimulationToolsLab	-	-	3	2
8	A13282	ElectricalCircuitsLab	-	-	3	2
9	A14MC4	ProfessionalEthicsHumanValuesand Self Development	2	0	0	0
		<b>Total</b>	<b>22</b>	<b>8</b>	<b>6</b>	<b>24</b>

L – Lecture T – Tutorial P – Practical D – Drawing

### II YEAR II SEMESTER

S.No.	Course Code	CourseTitle	L	T	P/D	Credits
1	A14407	ElectronicCircuits	3	1	0	3
2	A14408	STLD	3	1	0	3
3	A14311	FluidMechanicsandHydraulicMachines	3	1	0	3
4	A14208	ElectricalMachines-II	4	1	0	4
5	A14209	PowerSystems-I	3	1	0	3
6	A14210	ControlSystems	4	1	0	4
7	A14283	ElectricalMachines Lab-I	-	0	3	2
8	A14484	ElectronicDevicesandCircuitslab	-	0	3	2
9	A14MC1	DisasterManagement	2	0	0	0
		<b>Total</b>	<b>22</b>	<b>6</b>	<b>6</b>	<b>24</b>

L – Lecture T – Tutorial P – Practical D – Drawing

### III YEAR I SEMESTER

S.No.	Course Code	Course Title	L	T/P	Credits
1	A15017	Managerial Economics and Financial Accounts	3	1	3
2	A15212	Power Electronics	3	1	3
3	A15213	Power Systems-II	3	1	3
4	A15214	Electrical Machines-III	3	1	3
5	Open Elective-1	<b>A15218 - Non Conventional Energy Sources</b> <b>A15219 - Energy Management</b>	3	1	3
6	Professional Electives	<b>A15215 - High Voltage Engineering</b>	3	1	3
		<b>A15216 - Advanced Control Systems</b>			
		<b>A15217 - Linear Systems Analysis</b>			
7	A15285	Electrical Machines Lab-II	0	2	2
8	A15286	Control Systems & Simulation Lab	0	2	2
9	MC-III	Personality Development & Behavioral Skills	2	0	2
<b>Total Credits</b>			<b>20</b>	<b>10</b>	<b>24</b>

L – Lecture T – Tutorial P – Practical D – Drawing

S.No.	Course Code	Course Title	L	T/P	Credits
1	A16421	IC Applications	3	1	3
2	A16221	Electrical Measurements & Measuring Instruments	3	1	3
3	A16222	Power Semiconductor Drives	3	1	3
4	A16223	Switchgear & Protection	3	1	3
5	Open Elective-2	<b>A16227 - Energy Auditing &amp; Conservation</b> <b>A16228 - Principles of Electric Power Utilization</b>	3	1	3
6	Professional Electives	<b>A16224 - Renewable Energy Sources</b> <b>A16225 - Reliability Engineering and Application to Power Systems</b> <b>A16226 - Digital Control Systems</b>	3	1	3
7	A16287	Power Electronics and Simulation Lab	0	2	2
8	A16090	Advanced Communication Skills Lab	0	2	2
9	MC-IV	Quantitative Methods & Logical Reasoning	2	0	2
<b>Total Credits</b>			<b>20</b>	<b>10</b>	<b>24</b>

### III YEAR II SEMESTER

L – Lecture T – Tutorial P – Practical D – Drawing

### c. MECHANICAL ENGINEERING

#### II YEAR I SEMESTER

Subject Code	Subject Name	L	T	P/D	Total Credits	Total Hours	Total Marks
A13013	Numerical Methods	3	1	0	3	4	100
A13207	Electrical and Electronics Engineering	3	1	0	3	4	100
A13308	Mechanics of Solids	4	1	0	4	5	100
A13309	Thermodynamics	4	1	0	4	5	100
A13310	Metallurgy and Material science	4	1	0	4	5	100
A13011	Environmental science	3	1	0	2	4	100
A13283	Electrical and Electronics Engineering Lab	0	0	3	2	3	75
A13383	Metallurgy and Mechanics of solids Lab	0	0	3	2	3	75
A13MC2	Intellectual Property Rights And Cyber Laws	2	0	0	0	2	50
	<b>Total</b>	<b>23</b>	<b>6</b>	<b>6</b>	<b>24</b>	35	800

L – Lecture T – Tutorial P – Practical D – Drawing

## d. ELECTRONICS AND COMMUNICATION ENGINEERING

### II YEAR I SEMESTER

Subject Code	Subject Name	L	T	P/D	Total Credits
A13012	Mathematics – IV	3	1	0	3
A13401	Electronic Devices and Circuits	3	1	0	3
A13402	Signals and Systems	4	0	0	4
A13403	Switching Theory and Logic Design	3	0	0	3
A13404	Electronic Measurements & Instruments	3	0	0	3
A13405	Probability Theory and Stochastic Processes	4	0	0	4
A13481	Electronic Devices and Circuits Lab	0	0	3	2
A13482	Basic Simulation Lab	0	0	3	2
A13MC1	Disaster Management	2	0	0	0
	<b>Total</b>	22	2	6	24

L – Lecture T – Tutorial P – Practical D – Drawing

### II YEAR II SEMESTER

Subject Code	Subject Name	L	T	P/D	Total Credits
A14211	Principles of Electrical Engineering	3	1	0	3
A14409	Electronic Circuit Analysis	4	0	0	4
A14410	Pulse and Digital Circuits	4	0	0	4
A14411	Electromagnetic Theory and Transmission Lines	4	0	0	4
A14412	Digital System Design	3	1	0	3
A14016	Environmental Science	2	0	0	2
A14485	ECA Lab	0	0	3	2
A14486	PDC Lab	0	0	3	2
A14MC2	IPR&CL	2	0	0	-
	<b>Total</b>	22	2	6	24

L – Lecture T – Tutorial P – Practical D – Drawing

## e. COMPUTER SCIENCE AND ENGINEERING

### II YEAR II SEMESTER

Subject Code	Subject Name	L	T	P/D	Total Credits
A14507	Design and Analysis of Algorithms	4	1	0	4
A14508	Computer Organization	3	1	0	3
A14509	Database Management Systems	3	1	0	4
A14510	Software Engineering	3	1	0	3
A14511	Java Programming	3	1	0	4
A14016	Environmental Science	2	1	0	2
A14586	Java Programming Lab	0	0	3	2
A14587	Database Management Systems lab	0	0	3	2
A14MC1	Disaster Management	2	0	0	-
	<b>Total</b>	<b>20</b>	<b>6</b>	<b>9</b>	<b>24</b>

L – Lecture T – Tutorial P – Practical D – Drawing

## f. Information Technology

### II YEAR II SEMESTER

Subject Code	Subject Name	L	T	P/D	Total Credits
A14507	Design and Analysis of Algorithms	4	1	0	4
A14508	Computer Organization	3	1	0	3
A14509	Database Management Systems	3	1	0	4
A14510	Software Engineering	3	1	0	3
A14511	Java Programming	3	1	0	4
A14016	Environmental Science	2	1	0	2
A14586	Java Programming Lab	0	0	3	2
A14587	Database Management Systems lab	0	0	3	2
A14MC4	Professional Ethics Human Values and Self	2	0	0	-

	Development				
<b>TOTALCREDITS</b>					<b>24</b>

**L – Lecture T – Tutorial P – Practical D – Drawing**