



Vidya Jyothi Institute of Technology(Autonomous)

(Accredited by NAAC & NBA Approved By A.I.C.T.E., New Delhi, Permanently Affiliated to JNTU, Hyd)
Aziz Nagar, C.B.Post, Hyderabad -500075

Department of Civil Engineering

R18 COURSE STRUCTURE

CIVILENGINEERING

I YEAR I SEMESTER

COURSE STRUCTURE

Subject Code	Subject Name	L	T	P/D	Total Credits	Total Hours
A21001	English	2	0	0	2.0	
A21002	Mathematics-I	3	1	0	4.0	
A21004	Chemistry	3	1	0	4.0	
A21501	Programming For Problem Solving-I	2	0	0	2.0	
A21081	English Language Skills Lab	0	0	2	1.0	
A21083	Chemistry Lab	0	0	3	1.5	
A21381	Engineering Workshop	0	1	3	2.5	
A21581	Programming For Problem Solving Lab-I		0	2	1.0	
TOTAL CRIEDTS					18	

I YEAR II SEMESTER

COURSE STRUCTURE

Subject Code	Subject Name	L	T	P/D	Total Credits	Total Hours
A22006	Mathematics-II	3	1	0	4.0	
A22007	Engineering Physics	3	1	0	4.0	
A22302	Engineering Graphics & Modeling	1	0	3	2.5	
A22303	Engineering Mechanics	4	0	0	4.0	
A22502	Programming For Problem Solving-II	2	0	0	2.0	
A22084	English communication Skills Lab (ECSL)	0	0	2	1.0	
A22085	Engineering Physics Lab	0	0	3	1.5	
A22582	Programming For Problem Solving Lab-II	0	0	2	1.0	
TOTAL CREDITS					20	

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



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II Year I Semester

Subject Code	Subject Name	L	T	P/D	Total Credits
A23009	Numerical Methods & Partial Differential Equations	3	0	0	3.0
A23101	Fluid Mechanics	3	0	0	3.0
A23102	Solid Mechanics – I	4	0	3	4.0
A23103	Engineering Geology	3	0	0	3.0
A23104	Surveying & Geomatics	3	0	2	3.0
A23010	Professional Communications	2	0	0	2.0
A23181	Surveying & Geomatics Lab	0	0	2	1.0
A23182	Engineering Geology Lab	0	0	2	1.0
A23MC1	Environmental Science	2	0	0	-
Total Number of Credits					20

II Year II Semester

Subject Code	Subject Name	L	T	P/D	Total Credits
A24013	Probability & Statistics	3	0	0	3.0
A24207	Principle of Electrical Engineering	3	0	0	3.0
A24105	Solid Mechanics-II	3	0	0	3.0
A24106	Environmental Engineering	3	0	0	3.0
A24107	Structural Analysis	3	0	0	3.0
A24108	Building Materials and Construction	3	0	0	3.0
A24183	Environmental Engineering Lab	0	0	2	1.0
A24184	Solid Mechanics Lab	0	0	2	1.0
A24MC1	Gender Sensitization	2	0	0	-
Total					20



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Department of Civil Engineering

III/I Semester

S.No.	Course Code	Category	Course Title	L	T	P	C
1	A25016	H&S-2	Managerial Economics and Financial Analysis	3	0	0	3
2	A25110	PC – 8	Design of Reinforced Concrete Structures	3	1	0	3
3	A25111	PC – 9	Geotechnical Engineering	3	1	0	3
4	A25112	PC – 10	Concrete Technology	3	1	0	3
5	A25113 A25114 A25115	PE – 1	1. Advanced Structural Analysis 2. Building planning & Drawing 3. Air Pollution and Control Methods	3	1	0	3
6	A25116 A25117	OE – 1	1. Smart Cities	3	0	0	3
7	A25185	ES Lab – 1	CAD Lab.	0	0	3	1
8	A25087	H&S Lab.	Advance Communication Skills Lab	0	0	3	1
9	A25TP1	ES – 2	Quantitative Methods & Logical Reasoning	2	0	0	1
Total number of Credits							21

III/II Semester

S.No.	Course Code	Category	Course Title	L	T	P	C
1	A26118	PC - 11	Foundation Engineering	3	1	0	3
2	A26119	PC – 12	Design of Steel Structures	3	1	0	3
3	A26120	PC – 13	Hydraulics & Hydraulic Machinery	3	0	0	3
4	A26121	PC – 14	Water Resources Engineering	3	1	0	3
5	A26122 A26123 A26124	PE – 2	1. Construction Engineering Management 2. Ground Improvement Techniques 3. Finite Element Method	3	1	0	3
6	A26125 A26126	OE – 2	1. Green Building Technologies 2. Environmental Pollution & Control Methods	3	0	0	3
7	A26186	PC Lab – 5	Geotechnical Engineering Lab	0	0	3	1
8	A26187	PC Lab – 6	Fluid Mechanics & Hydraulic Machinery Lab	0	0	3	1
9	A26TP1	H&S-3	Personality Development & Behavioural Skills	2	0	0	1
Total number of Credits							21



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Department of Civil Engineering

IV/I Semester

S. No.	Course Code	Category	Course Title	L	T	P	C
1	A27127	PC – 15	Highway Engineering	3	1	0	3
2	A27128	PC – 16	Estimation & Costing	3	1	0	3
3	A27129 A27130 A27131	PE – 3	1. Pre stressed Concrete Structure 2. Earthquake Engineering 3. Green Building Technologies	3	1	0	3
4	A27132 A27133 A27134	PE – 4	1. Railway Airport and Harbour Engineering 2. Advanced Structural Design 3. Ground water Hydrology	3	1	0	3
5	A27135 A27136	OE – 3	1. Remote Sensing & GIS 2. Introduction to Earthquake Engineering	3	0	0	3
6	A27188	PC Lab – 7	Concrete & Highway Material Lab	0	0	3	1
7	A27189	PC Lab - 8	Computational Lab	0	0	3	1
8	A271P1	--	Industry Oriented Mini Project	0	0	5	3
Total number of Credits							20

IV/II Semester

S. No.	Course Code	Category	Course Title	L	T	P	C
1	A28137	PC – 17	Repair and Rehabilitation of structures	3	1	0	3
2	A28138	PC – 18	Remote Sensing & GIS	3	1	0	3
3	A281TS	--	Technical Seminar	0	0	2	2
4	A281CV	--	Comprehensive Viva Voce	0	0	0	2
5	A281P2	--	Major Project	0	0	20	10
Total number of Credits							20



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I YEAR B TECH ISEM COURSE STRUCTURE (R15): CIVIL ENGINEERING

S.No.	Code	Subject	L	T	P/D	Credits
1	A11001	English – I	2	0	0	2
2	A11002	Mathematics – I	4	1	0	3
3	A11003	Engineering Physics - I	3	1	0	3
4	A11501	C Programming	3	1	0	3
5	A11301	Engineering Graphics - I	2	0	3	3
6	A11302	Engineering Mechanics - I	3	1	0	3
7	A11581	C Programming Lab	0	0	3	2
8	A11081	English Language Communication Skills Lab - I	0	0	3	2
9	A11082	Engineering Physics Lab	0	0	3	2
10	A11381	Engineering Workshop	0	0	3	2
		Total Credits	17	7	15	25

I YEAR B TECH ISEM COURSE STRUCTURE: CIVIL ENGINEERING

S.No.	Code	Subject	L	T	P	Credits
1	A12005	English – II	2	0	0	2
2	A12006	Mathematics – II	4	1	0	3
3	A12007	Engineering Physics - II	3	1	0	3
4	A12008	Applied Chemistry	3	1	0	3
5	A12304	Engineering Mechanics – II	3	1	0	3
6	A12305	Engineering Graphics – II	2	0	3	3
7	A12085	English Language Communication Skills Labs –II	0	0	3	2
8	A12086	Engineering Physics and Chemistry Lab	0	0	3	2
9	A12087	IT & Engineering Workshop	0	0	3	2
		Total Credits	17	7	12	23

**II YEAR COURSE STRUCTURE: CIVIL ENGINEERING
II YEAR B TECH I SEM**

S.No	Code	Subject	L	T	P	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
			20	4	6	24

II YEAR B TECH II SEM

S.No	Code	Subject	L	T	P	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
			20	4	6	24

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 COURSE STRUCTURE:
III YEAR B TECH ISEM**

S.No.	Code	Subject	L	T	P	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		Open Elective 1	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
		Total Credits	18	3	9	24

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

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

III YEAR B TECH II SEM

S.No.	Code	Subject	L	T	P	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		Open Elective – 2	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
		Total Credits	18	3	9	24

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

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

**IVYEAR COURSE STRUCTURE: CIVIL ENGINEERING
IV YEAR B TECH ISEM**

S.No.	Code	Subject	L	T	P	Credits
1	A17126	Estimating & Costing	3	1	0	3
2	A17127	Water Resources Engineering-II	3	1	0	3
3	A17128	Railways, Airports and Harbors	3	1	0	3
4	Professional Electives- 3 A17129 A17130 A17131 A17132	1.Finite Element Methods 2. Advanced Foundation Engineering 3.Solid Waste management 4. Remote sensing & GIS	3	0	0	3
5	Professional Electives- 4 A17133 A17134 A17135 A17136	1.Advanced Structural Design 2. Air Pollution and Control methods 3.Water Resources Systems Analysis 4. Industrial Waste Water Treatment	3	0	0	3
6		Open Elective 3	3	0	0	3
7	Lab- 1 A17188	Concrete & Highway Materials Lab	0	0	3	2
8	Lab –II A17189	Environmental Engineering Lab	0	0	3	2
9	MP-1	Industry Oriented Mini Project	3	0	0	2
		Total Credits	21	3	6	24

**Note: Open Elective -3: Offered by the Civil engineering department for other branches
Except Mechanical Engineering**

- Elements of Civil Engineering (A17137)
- Introduction to Earthquake Engineering (A17138)

IV YEAR B TECH II SEM

S.No.	Code	Subject	L	T	P	C
1	A18139	Construction Management	3	0	0	3
2	A18140	Rehabilitation and retrofitting of structures	3	0	0	3
	A18141	Pre- stressed Concrete	3	1	0	3
4	A181TS	Technical Seminar	0	0	6	2
5	A181P2	Major Project	0	0	14	11
6	A181CV	Comprehensive Viva	0	0	0	2
		Total Credits	9	1	20	24

L- Lecture

T- Tutirial

P- Practical

C-Credits

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
	Total	19	16	56

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
	Total	24	6	28

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
	Total	24	6	28

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
	Open Elective	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
	Total	24	6	28

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
	Elective -I	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
	Total	23	8	28

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
	Elective-II	4	-	4
A70330	Finite Element Methods			
A70134	Advanced Foundation Engineering			
A70145	Watershed Management			
A70136	Air Pollution and Control			
	Elective-III	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
	Total	24	6	28

IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Elective-IV	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
	Total	12	21	28

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

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