ACADEMIC REGULATIONS & COURSE STRUCTURE

For

COMPUTER AIDED STRUCTURAL ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

I Semester

S. No.	Subject	L	P	Credits
1	Advanced Mathematics	4	-	3
2	Matrix Analysis of Structures	4	-	3
3	Theory of Elasticity	4	-	3
4	C++ and Data Structures	4	-	3
5	**Elective – I** I. Experimental Stress Analysis II. Optimization in Structural Design III. Structural Health Monitoring	4	-	3
6	**Elective – II** I. Modeling, Simulation & Computer Applications II. Prestressed Concrete Structure III. Stability of Structures	4	-	3
7	CAD Laboratory – I	-	3	2
Total Credits				**20**

II Semester

S. No.	Subject	L	P	Credits
1	Structural Dynamics	4	-	3
2	Finite Element Analysis	4	-	3
3	Artificial Neural Networks	4	-	3
4	CAD & Computer Applications in Structural Engineering	4	-	3
5	**Elective – III** I. Analysis of Shells and Folded Plates II. Reliability Based Engineering Design III. Earthquake Resistant Structures	4	-	3
6	**Elective – IV** 1. Management Information Systems 2. Fracture Mechanics 3. Advanced Concrete Technology	4	-	3
7	CAD Laboratory – II	-	3	2
Total Credits				**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	**--**	**--**	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

TRANSPORTATION ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

I Semester

S. No.	Subject	L	P	Credits
1	Advanced Mathematics	4	-	3
2	Pavement Analysis Design and Evaluation	4	-	3
3	Traffic Engineering	4	-	3
4	Urban Transportation Program	4	-	3
5	**Elective – I** I. Bridge Engineering II. Project Management	4	-	3
6	**Elective – II** I. GIS for Transportation II. Pavement Management System	4	-	3
7	Transportation Engineering Lab – I	-	3	2
Total Credits				**20**

II Semester

S. No.	Subject	L	P	Credits
1	Transportation Economics and Project Appraisal	4	-	3
2	Traffic Flow Analysis	4	-	3
3	Land Use and Regional Transportation Planning		-	3
4	Transportation Systems Management	4	-	3
5	**Elective – III** I. Pavement Construction and Evaluation II. Environmental Impact Assessment	4	-	3
6	**Elective – IV** I. Intelligent Transportation Systems II. Ground Improvement Techniques	4	-	3
7	Transportation Engineering Lab – II	-	3	2
Total Credits				**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	**--**	**--**	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**

ACADEMIC REGULATIONS & COURSE STRUCTURE

Common For

SOIL MECHANICS & FOUNDATION ENGG. AND GEOTECHNICAL ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

I Semester

S. No.	Subject	L	P	Credits
1	Advanced Mathematics	4	-	3
2	Advanced Soil Mechanics	4	-	3
3	Foundation Engineering – I	4	-	3
4	Ground Improvement Techniques	4	-	3
5	**Elective – I** I. Designing with Geosynthetics II. Soil-Foundation Interaction III. Critical State Soil Mechanics	4	-	3
6	**Elective – II** I. Earth Dams II. Rock Mechanics III. Remote Sensing and Geographical Information Systems	4	-	3
7	Advanced Geotechnical Lab	-	3	2
Total Credits				**20**

II Semester

S. No.	Subject	L	P	Credits
1	Foundation Engineering – II	4	-	3
2	Earth Retaining Structure	4	-	3
3	Soil Dynamics & Machine Foundations	4	-	3
4	Construction in Expansive Soils	4	-	3
5	**Elective – III** I. Pavement Analysis, Design and Evaluation II. Construction Planning and Methods III. Geotechnical Earth Quake Engineering	4	-	3
6	**Elective – IV** I. Geo-Environmental Engineering II. Numerical Methods in Geotechnical Engineering III. Finite Element Method	4	-	3
7	Computational Methods in Geotechnical Engineering Lab	-	3	2
Total Credits				**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	**--**	**--**	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

SPATIAL INFORMATION TECHNOLOGY

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

I Semester

S. No.	Subject	L	P	Credits
1	Principles of Photogrammetry	4	-	3
2	Principles of Remote Sensing	4	-	3
3	Principles of Geographical Information Systems	4	-	3
4	Digital Image Processing	4	-	3
5	Object Oriented Programming through JAVA	4	-	3
6	**Elective – I** I. Data Base Management Systems II. Principles of Geo-Data Base III. Web Technologies	4	-	3
7	Map Analysis & Photogrammetry Lab and Satellite Image Interpretation Lab	-	4	2
Total Credits				**20**

II Semester

S. No.	Subject	L	P	Credits
1	Geodesy and GNSS	4	-	3
2	Internet GIS	4	-	3
3	Advanced Remote Sensing	4	-	3
4	GIS Analysis & Applications	4	-	3
5	Remote Sensing and GIS for Natural Resource Management	4	-	3
6	**Elective – IV** I. RS & GIS Disaster Management II. Data Warehousing & Data Mining III. Advanced Surveying & Cartography IV. Digital Photogrammetry V. Geo-Statistical Methods	4	-	3
7	Digital Image Processing Lab & GIS & GPS Lab	-	4	2
Total Credits				**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	**--**	**--**	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

STRUCTURAL ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

I Semester

S. No.	Subject	L	P	Credits
1	Advanced Mathematics	4	-	3
2	Theory of Elasticity	4	-	3
3	Matrix Analysis of Structures	4	-	3
4	Structural Dynamics	4	-	3
5	**Elective – I** I. Experimental Stress Analysis II. Sub-Structure Design III. Structural Optimization	4	-	3
6	**Elective – II** I. Repair and Rehabilitation of Structures II. Analysis and Design of Tall Buildings III. Plastic Analysis and Design	4	-	3
7	Advanced Structural Engineering Laboratory	-	3	2
Total Credits				**20**

II Semester

S. No.	Subject	L	P	Credits
1	Finite Element Method	4	-	3
2	Earthquake Resistant Design	4	-	3
3	Stability of Structures		-	3
4	Theory of Plates & Shells	4	-	3
5	**Elective – III** I. Pre-Stressed Concrete II. Mechanics of Composite Materials III. Fracture Mechanics			
6	**Elective – IV** I. Industrial Structures II. Bridge Engineering III. Earth Retaining Structures	4	-	3
7	CAD Laboratory	-	3	2
Total Credits				**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	**--**	**--**	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

GEOINFORMATICS

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

I Semester

S. No.	Subject	L	P	Credits
1	Geo-Informatics Tools & Techniques	4	-	3
2	Principles of Remote Sensing	4	-	3
3	Principles of Geographic Information Systems	4	-	3
4	Earth Systems	4	-	3
5	Object Oriented Programming through JAVA	4	-	3
6	Elective – I I. Data Base Management Systems II. Principles of Geo-Data Base III. Web Technologies	4	-	3
7	Map Analysis & Photogrammetry Lab & Satellite Image Interpretation Lab	-	4	2
Total Credits				**20**

II Semester

S. No.	Subject	L	P	Credits
1	Digital Photogrammetry	4	-	3
2	Digital Image Processing	4	-	3
3	Internet GIS	4	-	3
4	Geodesy & GNSS	4	-	3
5	Spatial Decision Support Systems	4	-	3
6	Elective – IV I. Disaster Management II. Data Warehousing & Data Mining III. Advanced Surveying and Cartography IV. Remote Sensing and GIS Applications in Environment V. Geo-Statistical Methods	4	-	3
7	Digital Image Processing Lab & GIS & GPS Lab	-	4	2
Total Credits				**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	**--**	**--**	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**

ACADEMIC REGULATIONS & COURSE STRUCTURE

For

ENVIRONMENTAL ENGINEERING

(Applicable for batches admitted from 2016-2017)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA - 533 003, Andhra Pradesh, India

I Semester

S. No.	Subject	L	P	Credits
1	Mathematics for Environmental Engineers	4	-	3
2	Environmental Chemistry and Microbiology	4	-	3
3	Environmental Hydrology and Hydraulics	4	-	3
4	Environmental Impact Assessment and Management	4	-	3
5	Elective – I I. Environmental Legislations and Management Systems II. Environmental Systems Analysis III. Environmental Biotechnology	4	-	3
6	Occupational Health, Safety and Hygiene	4	-	3
7	Environmental Engineering Laboratory	-	3	2
Total Credits				**20**

II Semester

S. No.	Subject	L	P	Credits
1	Advanced Water and Waste Water Treatment	4	-	3
2	Air and Noise Pollution and Control	4	-	3
3	Solid and Hazardous Waste Management	4	-	3
4	Industrial Waste Water Management	4	-	3
5	Elective – II I. Design and Operation of Water and Waste Water Treatment Plants II. Agricultural Pollution and Control III. Bioremediation	4	-	3
6	Cleaner Production and Environmental Management	4	-	3
7	Computer Applications in Environmental Engineering	-	3	2
Total Credits				**20**

III Semester

S. No.	Subject	L	P	Credits
1	Comprehensive Viva-Voce	**--**	**--**	2
2	Seminar – I	--	--	2
3	Project Work Part – I	--	--	16
Total Credits				**20**

IV Semester

S. No.	Subject	L	P	Credits
1	Seminar – II	--	--	2
2	Project Work Part - II	--	--	18
Total Credits				**20**