

1.1.3_CE_file no:3 –List of all the courses

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR*(Established by Govt. of A.P., Act. No. 30 of 2008)***ANANTHAPURAMU – 515 002 (A.P.) INDIA.****Course Structure for B.Tech-R15 Regulations****Civil Engineering****I B.Tech. - I Semester**

S.No	Course code	Subject	*L	*T	*P	*Drg	*C
1.	15A52101	Functional English	3	1	-	-	3
2.	15A54101	Mathematics – I	3	1	-	-	3
3.	15A05101	Computer Programming	3	1	-	-	3
4.	15A56101	Engineering Physics	3	1	-	-	3
5.	15A03101	Engineering Drawing	-	-	-	6	3
6.	15A52102	English Language Communication Skills Lab	-	-	4	-	2
7.	15A56102	Engineering Physics Lab	-	-	4	-	2
8.	15A05102	Computer Programming Lab	-	-	4	-	2
Total			12	4	12	6	21

I-II Semester

S.No	Course code	Subject	L	T	P	C
1.	15A52201	English for Professional Communication	3	1	-	3
2.	15A54201	Mathematics – II	3	1	-	3
3.	15A01201	Engineering Mechanics	3	1	-	3
4.	15A51101	Engineering Chemistry	3	1	-	3
5.	15A01101	Environmental Studies	3	1	-	3
6.	15A01202	Applied Mechanics Lab	-	-	4	2
7.	15A51102	Engineering Chemistry Lab	-	-	4	2
8.	15A99201	Engineering & IT Workshop	-	-	4	2
Total			15	5	12	21

- * L - Lecture hours
 * T - Tutorial hours
 * P - Practical hours
 * Drg - Drawing
 * C - Credits

II B. Tech – I Sem

S.No.	Course Code	Subject	L	T	P	C
1	15A54301	Mathematics - III	3	1	-	3
2	15A01301	Electrical and Mechanical Technology	3	1	-	3
3	15A01302	Building Materials and Construction	3	1	-	3
4	15A01303	Strength of Materials – I	3	1	-	3
5	15A01304	Surveying – I	3	1	-	3
6	15A01305	Fluid Mechanics	3	1	-	3
7	15A01306	Surveying Laboratory – I	-	-	4	2
8	15A01307	Strength of Materials Laboratory	-	-	4	2
Total			18	06	08	22

II B. Tech – II Sem

S.No.	Course Code	Subject	L	T	P	C
1	15A54401	Probability and Statistics	3	1	-	3
2	15A52301	Managerial Economics & Financial Analysis	3	1	-	3
3	15A01401	Strength of Materials – II	3	1	-	3
4	15A01402	Surveying – II	3	1	-	3
5	15A01403	Structural Analysis – I	3	1	-	3
6	15A01404	Hydraulics & Hydraulic Machinery	3	1	-	3
7	15A01405	Fluid Mechanics & Hydraulic Machinery Laboratory	-	-	4	2
8	15A01406	Surveying Laboratory – II	-	-	4	2
9	15A01407	Comprehensive Online Examination-I	-	-	-	1
Total			18	06	08	23

Note:- Survey camp for a duration of two weeks to be conducted before the commencement of III B.Tech, I – Sem class work, in the II B.Tech, II – Sem break. This survey camp has to be evaluated for 50 marks by the internal faculty. It has a weightage of 2 credits. The marks and credits will be incorporated in IV – B.Tech, II – Sem marks memo.

B.Tech III-I Semester (C.E)

S. No.	Course Code	Subject	L	T	P	C
1.	15A01501	Design and Drawing of RCC Structures	3	1	-	3
2.	15A01502	Estimation, Costing and Valuation	3	1	-	3
3.	15A01503	Geotechnical Engineering – I	3	1	-	3
4.	15A01504	Engineering Geology	3	1	-	3
5.	15A01505	Structural Analysis – II	3	1	-	3
6.		MOOCS-I*	3	1	-	3
	15A01506	1. Cost Effective Housing Techniques				
	15A01507	2. Water Harvesting and Conservation				
7.	15A01508	Engineering Geology Laboratory	-	-	4	2
8.	15A01509	Geotechnical Engineering Laboratory	-	-	4	2
9.	15A99501	Audit course - Social Values & Ethics	2	0	2	0
Total			20	6	10	22

B.Tech III-II Semester (C.E)

S. No.	Course Code	Subject	L	T	P	C
1.	15A01601	Concrete Technology	3	1	-	3
2.	15A01602	Design and Drawing of Steel Structures	3	1	-	3
3.	15A01603	Geotechnical Engineering – II	3	1	-	3
4.	15A01604	Transportation Engineering - I	3	1	-	3
5.	15A01605	Water Resources Engineering – I	3	1	-	3
6.		CBCC-I	3	1	-	3
	15A01606	1. Remote Sensing & GIS				
	15A01607	2. Disaster Management & Mitigation				
	15A01608	3. Intellectual Property Rights				
7.	15A01609	Concrete Technology Laboratory	-	-	4	2
8.	15A01610	Transportation Engineering Laboratory	-	-	4	2
9.	15A52602	Advanced English Language Communication Skills (AELCS) Laboratory (Audit Course)	-	-	2	0
10.	15A01611	Comprehensive Online Examination-II	-	-	-	1
Total			18	06	12	23

B.Tech IV-I Semester (C.E)

S. No.	Course Code	Subject	L	T	P	C
1.	15A01701	Finite Element Methods	3	1	-	3
2.	15A01702	Transportation Engineering - II	3	1	-	3
3.	15A01703	Environmental Engineering	3	1	-	3
4.	15A01704	Water Resources Engineering – II	3	1	-	3
5.	15A01705 15A01706 15A01707	CBCC-II 1. Design and Drawing of Irrigation Structures 2. Ground Improvement Techniques 3. Air Pollution and Quality Control	3	1	-	3
6.	15A01708 15A01709 15A01710	CBCC-III 1. Bridge Engineering 2. Earth Quake Resistant Design of Structures 3. Rehabilitation and Retrofitting of Structures	3	1	-	3
7.	15A01711	CAD Laboratory	-	-	4	2
8.	15A01712	Environmental Engineering Laboratory	-	-	4	2
Total			18	6	8	22

B.Tech IV-II Semester (C.E)

S. No.	Course Code	Subject	L	T	P	C
1.	15A01801 15A01802	MOOCS – II* 1. Urban Transportation Planning 2. Advanced Structural Engineering	3	1	-	3
2.	15A01803 15A01804	MOOCS – III* 1. Prestressed Concrete 2. Environmental Impact Assessment and Management	3	1	-	3
3.	15A01805	Comprehensive Viva Voce	-	-	4	2
4.	15A01806	Technical Seminar	-	-	4	2
5.	15A01807	Project Work	-	-	24	10
6.	15A01808	Survey Camp**	-	-	-	2
Total			6	2	32	22

Annamacharya Institute of Technology and Sciences, Tirupati

Course structure for Four Year Regular B.Tech. Degree Program

(Effective for the batches admitted from 2019-20)

CIVIL ENGINEERING (CE)

I B. Tech – I Semester

INDUCTION PROGRAM (3 weeks duration)

- ❖ Physical activity
- ❖ Creative Arts
- ❖ Universal Human Values
- ❖ Literary
- ❖ Proficiency Modules
- ❖ Lectures by Eminent People
- ❖ Visits to local Areas
- ❖ Familiarization to Dept./Branch & Innovations

I B. Tech – I Semester

S.No	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
THEORY										
1	BSC	19ABS9901	Algebra and calculus	3	1	0	4	30	70	100
2	BSC	19ABS9903	Engineering Physics	3	0	0	3	30	70	100
3	ESC	19AES0501	Problem solving and programming	3	1	0	4	30	70	100
4	HSC	19AHS9901	Communicative English-I	2	0	0	2	30	70	100
PRACTICAL										
5	BSC	19ABS9908	Engineering Physics Lab	0	0	3	1.5	30	70	100
6	ESC	19AES0503	Problem solving and programming Lab	0	0	4	2	30	70	100
7	HSC	19AHS9902	Communicative English-I Lab	0	0	2	1	30	70	100
8	LC	19ALC0301	Engineering Workshop	0	0	2	1	30	70	100
Total							18.5	240	560	800

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I B. Tech – II Semester

S.No	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
THEORY										
1	BSC	19ABS9906	Differential Equations and Vector Calculus	3	1	0	4	30	70	100
2	BSC	19ABS9905	Engineering Chemistry	3	0	0	3	30	70	100
3	ESC	19AES0202	Basics of Electrical and Electronics Engineering-I	3	0	0	3	30	70	100
4	ESC	19AES0502	Data Structures	3	0	0	3	30	70	100
PRACTICAL										
5	ESC	19AES0301	Engineering Graphics Lab	1	0	4	3	30	70	100
6	BSC	19ABS9910	Engineering Chemistry Lab	0	0	3	1.5	30	70	100
7	ESC	19AES0204	Basics of Electrical and Electronics Engineering -I Lab	0	0	3	1.5	30	70	100
8	ESC	19AES0504	Data Structures Lab	0	0	3	1.5	30	70	100
9	LC	19ALC0101	Civil Engineering Workshop	0	0	2	1	30	70	100
Total							21.5	270	630	900


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II B. Tech –I Semester

S.No	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
THEORY										
1	BSC	19ABS9913	Probability & Statistics, PDE and Complex Variables	3	0	0	3	30	70	100
2	HSC	19AHS9903	Communicative English II	2	0	0	2	30	70	100
3	PCC	19APC0101	Mechanics of Materials	3	0	0	3	30	70	100
4	PCC	19APC0102	Surveying	4	0	0	4	30	70	100
5	PCC	19APC0103	Fluid Mechanics	3	0	0	3	30	70	100
6	PCC	19APC0104	Building Materials and Construction	2	0	0	2	30	70	100
7	MC	19AMC9901	Biology for Engineers	2	-	-	-	30	-	30
PRACTICAL										
8	HSC	19AHS9904	Communicative English Lab II	0	0	2	1	30	70	100
9	PCC	19APC0105	Strength of Materials Lab	0	0	3	1.5	30	70	100
10	PCC	19APC0106	Surveying Lab	0	0	4	2.0	30	70	100
TOTAL							21.5	300	630	930

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II B. Tech – II Semester

S.No	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
THEORY										
1	BSC	19ABS9915	Transform Techniques and Numerical Methods	3	0	0	3	30	70	100
2	ESC	19AES0509	Basics of Python Programming	2	0	0	2	30	70	100
3	PCC	19APC0107	Strength of Materials	3	0	0	3	30	70	100
4	PCC	19APC0108	Hydraulic Engineering	3	0	0	3	30	70	100
5	PCC	19APC0109	Structural Analysis – I	3	0	0	3	30	70	100
6	PCC	19APC0110	Concrete Technology	3	0	0	3	30	70	100
7	MC	19AMC9903	Environmental Studies	2	-	-	-	30	-	30
PRACTICAL										
8	ESC	19AES0510	Basics of Python Programming Lab	0	0	2	1.0	30	70	100
9	PCC	19APC0111	Fluid Mechanics and Hydraulic Machinery Lab	0	0	3	1.5	30	70	100
	PCC	19APC0112	Concrete Technology Lab	0	0	3	1.5	30	70	100
11	PRC	19APR0101	Socially Relevant Project (15 Hrs/Sem)	0	0	1	0.5	50	-	50
TOTAL							21.5	350	630	980

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III B. Tech – I Semester

S.N o	Cate gory	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CI E	SE E	Tota l
THEORY										
1	PCC	19APC0113	Soil Mechanics	3	1	0	4	30	70	100
2	PCC	19APC0114	Design of Reinforced Concrete Structures	3	1	0	4	30	70	100
3	PCC	19APC0115	Engineering Geology	2	0	0	2	30	70	100
4	PCC	19APC0116	Structural Analysis –II	3	0	0	3	30	70	100
5	PEC		Professional Elective I	2	0	0	2	30	70	100
		19APE0101	Building Planning and bye-laws							
		19APE0102	Water Harvesting and Conservation							
		19APE0103	Cost Effective Housing Techniques							
		19APE0104	Green Buildings							
		19APE0105	Photogrammetric Survey							
6	OEC		Open Elective I (Inter Disciplinary Elective I)	2	0	0	2	30	70	100
		19APE0416	Sensor Networks							
		19APC0521	Artificial Intelligence							
		19APC0323	Operations Research							
7	MC	19AMC9904	Professional Ethics and Human values	2	-	-	-	30	-	30
PRACTICAL										
8	PCC	19APC0117	Soil Mechanics Lab	0	0	3	1.5	30	70	100
9	PCC	19APC0118	Computer-aided Civil Engineering Drawing Lab	0	0	3	1.5	30	70	100
10	PEC	19APC0119	Engineering Geology Lab	0	0	2	1	30	70	100
11	PRC	19APR0102	Socially Relevant Projects (15Hrs/Sem)	0	0	1	0.5	50	-	50
TOTAL							21.5	350	630	980



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III B. Tech – II Semester

III B. Tech – II Semester										
S.N o	Cate gory	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
THEORY										
1	PCC	19APC0120	Foundation Engineering	3	0	0	3	30	70	100
2	PCC	19APC0121	Transportation Engineering	3	0	0	3	30	70	100
3	PCC	19APC0122	Remote Sensing and GIS	3	0	0	3	30	70	100
4	PEC		Professional Elective II	3	0	0	3	30	70	100
		19APE0106	Subsurface Investigation and Instrumentation							
		19APE0107	Prestressed Concrete							
		19APE0108	Advanced Structural Analysis							
		19APE0109	Railways, Airport, Docks & Harbor Engineering							
		19APE0110	Finite Element Methods							
5	OEC		Open Elective II (Inter Disciplinary Elective II)	3	0	0	3	30	70	100
		19AHSMB01	Managerial Economics and Financial Analysis							
		19AOE0301	Management Science							
		19AHSMB02	Entrepreneurship Development							
6	HSC		Humanities Elective I	3	0	0	3	30	70	100
		19AOE9901	English for Research writing skills							
		19AHE9911	Environmental waste Management							
		19AHE9902	Principles of EffectivePublic Speaking							
7	MC	19AMC9902	Constitution of India	2				30		30
PRACTICAL										
8	PCC	19APC0123	Remote Sensing and GIS Lab	0	0	3	1.5	30	70	100
9	PCC	19APC0124	Transportation Engineering lab	0	0	3	1.5	30	70	100
10	PRC	19APR0104	Industrial Training/ Internship/Research Projects in National Laboratories/Academic Institutions *	0	0	0	0	-	-	-
11	PRC	19APR0103	Socially Relevant Projects (15 hrs / semester)	0	0	1	0.5	50	-	50
TOTAL							21.5	350	630	880


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IV B. Tech – I Semester

S.N o	Cate gory	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CI E	SE E	Total
THEORY										
1	PCC	19APC0125	Estimation, Costing and Valuation	3	0	0	3	30	70	100
2	PCC	19APC0126	Design and Drawing of Steel Structures	3	0	0	3	30	70	100
3	PCC	19APC0127	Environmental Engineering	3	0	0	3	30	70	100
4	PCC	19APC0128	Hydrology and water resources engineering	2	0	0	2	30	70	100
5	PEC		Professional Elective III	2	0	0	2	30	70	100
		19APE0111	Ground Improvement Techniques							
		19APE0112	Watershed and River Basin Management							
		19APE0113	Engineering Materials for Sustainability							
		19APE0114	Air pollution and quality control							
		19APE0115	Bridge Engineering							
6	PEC		Professional Elective IV	2	0	0	2	30	70	100
		19APE0116	Repairs and Rehabilitation of Structures							
		19APE0117	Intelligent transportation systems							
		19APE0118	Hydro Power Engineering							
		19APE0119	Industrial Waste & Waste-Water Engineering							
		19APE0120	Construction Technology and Project Management							
PRACTICAL										
7	PCC	19APC0129	Structural Design and Drawing Lab	0	0	3	1.5	30	70	100
8	PCC	19APC0130	Environmental Engineering Lab	0	0	3	1.5	30	70	100
9	PRC	19APR0105	Socially Relevant Projects (15 hrs / semester)	0	0	1	0.5	50	-	50
10	PRC	19APR0106	Survey Camp/ Industrial Training/Internship/Research Projects in National Laboratories/Academic Institutions	0	0	1	0.5	50	-	50
TOTAL							19.0	340	560	900

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IV B. Tech – II Semester

S.No	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
1	OEC	Open Elective III (NPTEL)		3	0	0	3	--	--	100
		19AOE0518	An Introduction to Artificial Intelligence							
		19AOEMB03	Personality development							
		19AOEMB02	Entrepreneurship development							
2	PEC	Professional Elective V(NPTEL)		3	0	0	3	--	--	100
		19APE0121	Air pollution and control							
		19APE0122	Natural Hazards							
		19APE0123	Plastic waste management							
3	PRC	19APR0107	Technical Seminar	0	0	0	0	50	0	50
4	PRC	19APR0108	Project	0	0	14	9	60	140	200
TOTAL							15	110	140	450

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Course structure for Four Year Regular B.Tech. Degree Program
(Effective for the batches admitted from 2020-21)

CIVIL ENGINEERING (CE)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept./Branch & Innovations

Semester I (First year)

Sl. No.	Category	Course Code	Course Title	Hours per week				Credits	Scheme of Examination (Max. Marks)		
				L	T	P	C		COE	SEE	Total
1	Basic Science course	20ABS9901	Algebra and Calculus	3	0	0	3	30	30	70	100
2	Basic Science course	20ABS9905	Engineering Chemistry	3	0	0	3	30	30	70	100
3	Humanities and Social science	20AHS9901	Communicative English	3	0	0	3	30	30	70	100
4	*Engineering Science Courses	20AES0304	Engineering Workshop Practice	1	0	4	3	30	30	70	100
5	Engineering Science Courses	20AES0501	Problem Solving and Programming	3	0	0	3	30	30	70	100
6	Humanities and Social science LAB	20AHS9902	Communicative English Lab	0	0	3	1.5	30	30	70	100
7	Basic Science course (LAB)	20ABS9910	Engineering Chemistry Lab	0	0	3	1.5	30	30	70	100
8	Engineering Science Courses (LAB)	20AES0503	Problem Solving and Programming Lab	0	0	3	1.5	30	30	70	100
Total credits								19.5	240	560	800

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Semester II (First year)

Sl. No.	Category	Course Code	Course Title	Hours per week				Credits	Scheme of Examination (Max. Marks)		
				L	T	P	C		CIE	SEE	Total
1	Basic Science courses	20ABS9906	Differential Equations and Vector Calculus	3	0	0	3	30	30	70	100
2	Basic Science courses	20ABS9903	Engineering Physics	3	0	0	3	30	30	70	100
3	Engineering Science Courses	20AES0202	Basics of Electrical and Electronics Engineering	3	0	0	3	30	30	70	100
4	Engineering Science Courses	20AES0509	Basics of Python Programming	3	0	0	3	30	30	70	100
5	Engineering Science Courses	20AES0301	Engineering Graphics	1	0	4	3	30	30	70	100
6	Engineering Science Courses (LAB)	20AES0204	Basics of Electrical and Electronics Engineering Lab	0	0	3	1.5	30	30	70	100
7	Basic Science course (LAB)	20ABS9908	Engineering Physics Lab	0	0	3	1.5	30	30	70	100
8	Engineering Science Courses (LAB)	20AES0510	Basics of Python Programming Lab	0	0	3	1.5	30	30	70	100
9	Mandatory course (AICTE suggested)	20AMC9902	Constitution of India	2	0	0	0	30	-	-	30
Total credits								19.5	270	560	830

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Semester III (Second year)

Sl. No.	Category	Course Code	Course Title	Hours per week				Credits	Scheme of Examination (Max. Marks)		
				L	T	P	C		CIE	SEE	Total
1	Basic Science courses	20ABS9913	Probability & Statistics, Partial differential equations	3	0	0	3	30	30	70	100
2	Professional core course	20APC0101	Mechanics of Materials	3	0	0	3	30	30	70	100
3	Professional core course	20APC0102	Surveying	3	0	0	3	30	30	70	100
4	Professional core course	20APC0103	Fluid Mechanics	3	0	0	3	30	30	70	100
5	Humanities and social science	20AHSMB01	Managerial Economics and Financial Analysis	3	0	0	3	30	30	70	100
6	Professional core courses (LAB)	20APC0104	Strength of Materials Lab	0	0	3	1.5	30	30	70	100
7	Professional core courses (LAB)	20APC0105	Surveying Lab	0	0	3	1.5	30	30	70	100
8	Professional core courses (LAB)	20APC0106	Fluid Mechanics Lab	0	0	3	1.5	30	30	70	100
9	Skill Oriented Course*	20APC0107	Basics of CAD	1	0	2	2	100	-	-	100
10	Mandatory course (AICTE suggested)	20AMC9903	Environmental Studies	2	0	0	0	30	-	-	30
Total credits								21.5	370	560	930

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(Autonomous)

Course structure for Four Year Regular B.Tech. Degree Program

(Effective for the batches admitted from 2020-21)

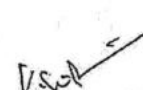
CIVIL ENGINEERING (CE)

Semester IV (Second year)

Sl. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
1	Basic Science courses	20ABS9922	Mathematical Modelling and optimization techniques	3	0	0	3	30	70	100
2	Professional core course	20APC0108	Strength of Materials	3	0	0	3	30	70	100
3	Professional core course	20APC0109	Hydraulic Engineering	3	0	0	3	30	70	100
4	Professional core course	20APC0110	Structural Analysis-I	3	0	0	3	30	70	100
5	Professional core course	20APC0111	Concrete Technology	3	0	0	3	30	70	100
6	Humanity Science Courses	20AHS9905	Universal Human Values	3	1	0	3	30	70	100
7	Professional core courses (LAB)	20APC0112	Hydraulic Machinery Lab	0	0	3	1.5	30	70	100
8	Professional core courses (LAB)	20APC0113	Concrete Technology Lab	0	0	3	1.5	30	70	100
9	Professional core courses (LAB)	20APC0114	Computer-aided Civil Engineering Drawing Lab	0	0	3	1.5	30	70	100
10	Skill Oriented Course*	20APC0115	Land survey with 2D drafting /Soft skills	1	0	2	2	100	-	100
Total credits							24.5	370	630	1000
Internship (Mandatory) 2 Months during summer vacation										
Honors/ Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4	30	70	100








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Course structure for Four Year Regular B.Tech. Degree Program
(Effective for the batches admitted from 2020-21)
CIVIL ENGINEERING (CE)

Semester V (third year)

Sl. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
1	Professional core course	20APC0116	Soil Mechanics	3	0	0	3	30	70	100
2	Professional core course	20APC0117	Building Technology	3	0	0	3	30	70	100
3	Professional core course	20APC0118	Engineering Geology	3	0	0	3	30	70	100
4	Open Elective course / Job Oriented Elective	20APE0417	Sensor Networks	3	0	0	3	30	70	100
		20APC0323	Operations Research							
		20AOE0301	Management Science							
5	Professional Elective courses	20APE0101	Structural Analysis-II	3	0	0	3	30	70	100
		20APE0102	Water Harvesting and Conservation							
		20APE0103	Cost Effective Housing Techniques							
6	Professional core courses (LAB)	20APC0119	Soil Mechanics Lab	0	0	3	1.5	30	70	100
7	Professional core courses (LAB)	20APC0120	Engineering Geology Lab	0	0	3	1.5	30	70	100
8	Skill Oriented Course*	20APC0121	Building planning & Drawing Lab	1	0	2	2	100	-	100
9	Mandatory course (AICTE suggested)		Professional Ethics and Human Values	2	0	0	0	50	-	30
	Summer Internship 2 months (Mandatory) after second Year (to be evaluated during V semester)			0	0	0	1.5	50	-	50
	Total credits						21.5	390	490	880
	Honors/ Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)			4	0	0	4	30	70	100

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2012-13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

Course Structure and syllabi for

M.Tech- Structural Engineering

**Offered by Department of Civil Engineering
for affiliated Engineering Colleges 2012-13**

I YEAR I Semester

S. No	Course code	Subject	Theory	Lab.	Credits
1.	12D20101	Higher Engineering Mathematics	4		4
2.	12D20102	Advanced Structural Analysis	4		4
3.	12D20103	Theory of Elasticity and Plasticity	4		4
4.	12D20104	Theory and Analysis of Plates	4		4
5.		Elective – I	4		4
	12D20105a	1. Experimental Stress Analysis			
	12D20105b	2. Advanced Structural Design			
	12D20105c	3. Low cost Housing Techniques			
6.		Elective – II	4		4
	12D20106a	1. Prestressed concrete			
	12D20106b	2. Maintenance and Rehabilitation of Structures			
	12D20106c	3. Advanced Foundation Engineering			
7.	12D20107	Concrete Laboratory - I		3	2
		contact periods/week	24	3	
			Total	27	26

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I YEAR II Semester

S. No	Course code	Subject	Theory	Lab.	Credits
1.	12D20201	Structural Dynamics	4		4
2.	12D20202	Finite Element Method	4		4
3.	12D20203	Stability of Structures	4		4
4.	12D20204	Analysis of shells and folded plates	4		4
5.		Elective – III	4		4
	12D20205a	1. Design of Bridges			
	12D20205b	2. Concrete Technology			
	12D20205c	3. Earthquake Resistant Structures			
6.		Elective – IV	4		4
	12D20206a	1. Advanced steel structures			
	12D20206b	2. Building Construction Management			
	12D20206c	3. Fracture Mechanics			
7.	12D20207	Concrete Laboratory - II		3	2
		contact periods/week	24	3	
			Total	27	26

II YEAR (III & IV Semesters)

S. No	Course code	Subject		credits
1	12D20401	Seminar		2
2	12D20402	Project work		16


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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR**Course Structure and syllabi for
M.Tech- Structural Engineering
for affiliated Engineering Colleges 2017-18****I YEAR I Semester**

S. No	Course Code	Subject	L	T	P	C
1.	17D20101	Advanced Mathematical Methods	4	---	---	4
2.	17D20102	Advanced Structural Analysis	4	---	---	4
3.	17D20103	Theory Of Elasticity And Plasticity	4	---	---	4
4.	17D20104	Theory And Analysis 'Of Plates	4	---	---	4
5.	17D20105 17D20106 17D20107	Elective – I 1. Experimental Stress Analysis 2. Advanced Concrete Technology 3. Low Cost Housing Techniques	4	---	---	4
6.	17D20108 17D20109 17D20110	Elective – II 1. Prestressed Concrete 2. Maintenance And Rehabilitation Of Structures 3. Advanced Foundation Engineering	4	---	---	4
7.	17D20111	Advanced Concrete Laboratory	--	---	4	2
		Total	24		4	26

I YEAR II Semester

S. No	Course Code	Subject	L	T	P	C
1.	17D20201	Structural Dynamics	4	---	---	4
2.	17D20202	Finite Element Methods	4	---	---	4
3.	17D20203	Stability Of Structures	4	---	---	4
4.	17D20204	Analysis Of Shells And Folded Plates	4	---	---	4
5.	17D20205 17D20206 17D20207	Elective – III 1. Design Of Bridges 2. Advanced Structural Design 3. Earthquake Resistant Structures	4	---	---	4
6.	17D20208 17D20209 17D20210	Elective – IV 1. Advanced Steel Structures 2. Building Construction And Management 3. Fracture Mechanics	4	---	---	4
7.	17D20211	Structural Design Studio	--	---	4	2
		Total	24		4	26

M.Tech. II YEAR (III Semester)

S. No	Course Code	Subject	L	T	P	C
1.	17D20301 17D20302 17D20303	Elective – V (Open Elective) 1. Research Methodology 2. Human Values & Professional Ethics 3. Intellectual Property Rights	4	---	---	4
2.	17D20304	ELECTIVE – VI (MOOCs)	--	---	---	--
3.	17D20305	Comprehensive Viva Voce	--	---	---	2
4.	17D20306	Seminar	--	---	---	2
5.	17D20307	Teaching Assignment	--	---	---	2
6.	17D20308	Project Work Phase I	--	---	---	4
	Total		4			14

M.Tech. II YEAR (IV Semester)

S. No	Course Code	Subject	L	T	P	C
1.	17D20401	Project Work Phase II	--	---	---	12
	Total					12

Project Viva Voce Grades:**A: Satisfactory****B: Not Satisfactory**


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