



**RAMIREDDY SUBBARAMI REDDY
ENGINEERING COLLEGE**
Engineering Excellence
Through Innovation

RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

*(Approved by AICTE, Affiliated to JNTUA. An ISO 9001: 2015 Certified Institution)
NH-16, Kadanuthala, Bogole Mandal, Kavali- 524 142, S.P.S.R. Nellore, Andhra Pradesh.)*

DEPARTMENT OF CIVIL ENGINEERING

COS & POS MAPPING OF ALL COURSES FRAMED UNDER JNTUA-R15 REGULATION

INDEX

List of all courses offered by the institution for the regulation R15, JNTUA

I B.Tech. - I Semester

S.No	Course code	Subject
1.	15A52101	Functional English
2.	15A54101	Mathematics – I
3.	15A05101	Computer Programming
4.	15A56101	Engineering Physics
5.	15A03101	Engineering Drawing
6.	15A52102	English Language Communication Skills Lab
7.	15A56102	Engineering Physics Lab
8.	15A05102	Computer Programming Lab

I-II Semester

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

II B. Tech – I Sem

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

II B. Tech – II Sem

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

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

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

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


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


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


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


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


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

 <p>RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE Engineering Excellence Through Innovation</p>	RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE														
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	DEPARTMENT OF HUMANITIES AND SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-I				Reg: R15				AY:						
Course Code:	Course Name: FUNCTIONAL ENGLISH											L	T	P	C
15A52101	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
2101.1	Acquire good listening skills to participate effectively in group discussions, debates, and interviews and writing skills for effective technical report writing. (BTL2)														
2101.2	Develop oral communication skills in English to speak fluently in various academic and social situations. (BTL3)														
2101.3	Identify deviant use of English both in spoken and written forms, and improve awareness of its in science and technology. (BTL2)														
2101.4	Understand the importance of reading for life, and career and thereby develop an interest for it. (BTL2)														
2101.5	Demonstrate fundamental skills required for critical thinking. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
2101.1									3	3	2	3			
2101.2									2	3	2	3			
2101.3									3	3	2	3			
2101.4									3	2	2	2			
2101.5									3	3	2	3			
AVG	0	0	0	0	0	0	0	0	3	3	3	3			
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF HUMANITIES AND SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-I				Reg: R15				AY:						
Course Code:	Course Name: Mathematics – I											L	T	P	C
15A4101	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
4101.1	Solve the First, Second and Higher order D.Es and Applications of First Order D.E (BTL3)														
4101.2	Attain the knowledge of Applications of L.D.Es like Mechanical & Electrical Oscillatory circuits and deflection of beams (BTL2)														
4101.3	Familiarize with functions of several variables which is useful in Optimizations. (BTL6)														
4101.4	Determine important tools of calculus in Higher Dimensions (Multiple Integrals) (BTL5)														
4101.5	Become familiar with the applications of vector calculus to Engineering Problems. (BTL6)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
4101.1	3	2	2	2	-	-	-	-	-	-	-	2	2	2	
4101.2	3	2	2	2	-	-	-	-	-	-	-	2	2	2	
4101.3	2	3	3	2	-	-	-	-	-	-	-	2	2	3	
4101.4	2	3	2	2	-	-	-	-	-	-	-	1	2	2	
4101.5	3	3	2	2	-	-	-	-	-	-	-	2	2	2	
AVG	3	3	2	2	-	-	-	-	-	-	-	2	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															

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	DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I – I				Reg: R15				AY:						
Course Code:	Course Name: Computer Programming											L	T	P	C
15A05101	Prerequisite: Nil											3	1	-	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
5101.1	Analyze overview of computer programming (BTL4)														
5101.2	Understand various statements in C and discuss the arrays, stings, functions (BTL2)														
5101.3	Illustrate pointers and understanding the scope of functions. (BTL2)														
5101.4	Develop the command line arguments and structures (BTL 3)														
5101.5	Understand the file handling functions and pre-processor directives. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
5101.1	3	2	2	2	-	-	-	-	-	-	-	2	2	3	
5101.2	3	3	3	3	-	-	-	-	-	-	-	2	2	3	
5101.3	3	3	2	3	-	-	-	-	-	-	-	3	2	2	
5101.4	2	3	3	2	-	-	-	-	-	-	-	3	3	2	
5101.5	2	3	3	2	-	-	-	-	-	-	-	3	2	2	
AVG	3	3	3	2	-	-	-	-	-	-	-	3	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF HUMANITIES AND SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-II				Reg: R15				AY:						
Course Code:	Course Name: Engineering Physics											L	T	P	C
15A56101	Prerequisite: NONE											3	0	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
6101.1	Articulate interference, diffraction (BTL3), Analyze (BTL4). Device laser (BTL4), Develop optic fiber (BTL6)														
6101.2	Interpret crystallography (BTL2), Use ultrasonics (BTL3).														
6101.3	Illustrate quantum mechanics (BTL1) and solve electron theory(BTL3).														
6101.4	Categorize semiconductors and magnetic materials (BTL4).														
6101.5	Explain superconductivity (BTL1) and Connect nanomaterials (BTL4)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
6101.1	2	3	2	2	3	1	-	-	-	-	-	1	2	3	
6101.2	3	2	3	2	2	3	-	-	-	-	-	1	3	3	
6101.3	2	3	2	1	2	2	-	-	-	-	-	2	3	3	
6101.4	3	3	3	1	3	1	-	-	-	-	-	1	2	2	
6101.5	3	2	2	2	2	2	-	-	-	-	-	3	2	2	
AVG	3	3	3	2	3	3						2	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															

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	DEPARTMENT OF HUMANITIES AND SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-I				Reg: R15					AY:					
Course Code:	Course Name: ENGINEERING DRAWING											L	T	P	C
15A03101	Prerequisite: NONE											1	0	.5	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
3101T.1	Draw various curves applied in engineering.														
3101T.2	Show projections of points, lines, planes and solids graphically.														
3101T.3	Draw the development of surfaces of solids.														
3101T.4	Use computers as a drafting tool.														
3101T.5	Draw isometric and orthographic drawings using CAD packages.														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
3101T.1	3	1	1	-	-	-	-	-	-	3	-	-	3	1	
3101T.2	3	3	2	-	-	-	-	-	-	3	-	-	3	1	
3101T.3	3	1	1	-	-	-	-	-	-	3	-	-	3	1	
3101T.4	3	3	3	-	-	-	-	-	1	3	-	-	3	1	
3101T.5	3	2	3	1	-	-	-	-	2	3	-	-	3	1	
AVG	3	2	2	-	-	-	-	-	1	3	-	-	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															



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DEPARTMENT OF HUMANITIES AND SCIENCE

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: I-I

Reg: R15

AY:

Course Code:	Course Name: Engineering Physics Lab	L	T	P	C
15A56102	Prerequisite: Basic definitions and concepts of Physics	0	0	4	2


COURSE OUTCOMES (COs)


CO No.	COURSE OUTCOME
56102.1	Application of interference and diffraction(exp.no:1,2,8,10) (BTL3)
56102.2	Determination of NA, AA, Energy gap(exp.no:3,4) (BTL5)
56102.3	Calculations using laser (exp.no:11,12,13) (BTL3)
56102.4	Evaluation of dispersive power (exp.no:9) (BTL5)
56102.5	Analysing variation of magnetic field (exp.no:14) (BTL4)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
56102.1	3	3	2	1	3	1	-	-	-	-	-	1	3	3
56102.2	3	2	3	2	2	2	-	-	-	-	-	2	3	2
56102.3	2	1	2	2	3	2	-	-	-	-	-	2	3	3
56102.4	3	2	2	1	3	1	-	-	-	-	-	1	2	1
56102.5	3	2	2	3	2	2	-	-	-	-	-	3	2	2
AVG	3	3	3	2	3	2						2	3	3

3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low

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	DEPARTMENT OF HUMANITIES AND SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-I				Reg: R15				AY:						
Course Code:	Course Name: COMPUTER PROGRAMMING LAB											L	T	P	C
15A05102	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
5102.1	To understand programs with simple data types, variables, constants and I/O statements in C.														
5102.2	To Solve problems by using control structures and modularity														
5102.3	Build programs using basic data structures include arrays, strings and structures														
5102.4	To make use of the user define functions, recursive and non-recursive functions in C programs.														
5102.5	Apply pointers and dynamic memory allocation for dealing real world problems														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
5102.1	2	2	2	2	-	-	-	-	3	-	-	3	2	3	
5102.2	3	3	2	3	-	-	-	-	3	-	-	2	3	2	
5102.3	3	2	2	2	-	-	-	-	3	-	-	2	2	3	
5102.4	3	3	2	2	-	-	-	-	3	-	-	2	2	3	
5102.5	3	3	2	2	-	-	-	-	3	-	-	2	3	2	
AVG	3	3	2	2	-	-	-	-	3	-	-	2	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I – II				Reg: R15				AY:						
Course Code:	Course Name: ENGLISH FOR PROFESSIONAL COMMUNICATION											L	T	P	C
15A52201	Prerequisite: Nil											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
2201.1	Participate effectively in debates on modern corporatism and listen, and speak well in English in group discussions. (BTL3)														
2201.2	Recall the alternative sources of energy by listening, summarizing and rewriting reports. (BTL1)														
2201.3	Develop report writing skills. (BTL3)														
2201.4	Interpret charts and tables. (BTL2)														
2201.5	Communicate effectively in interviews by developing required competencethereby enhancing improving job prospects. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
2201.1									3	3	2	2			
2201.2									2	3	-	2			
2201.3									3	3	2	3			
2201.4									3	3	3	3			
2201.5									3	3	1	3			
AVG									3	3	3	3			
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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: I-II

Reg: R15

AY:

Course Code:

Course Name: **Engineering Mechanics**

L

T

P

C

15A01201

Prerequisite: None

3

1

0

3

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1501.1

To understand and apply the principles of statics to rigid bodies subjected to forces. (BTL3)

1501.2

To analyze the concepts of friction and evaluate the equilibrium of given systems involved in friction. (BTL5)

1501.3

To understand and apply the concepts of Centroids and Moments of inertia. (BTL3)

1501.4

To evaluate the rigid body systems by applying the concepts of Kinematics and Kinetics. (BTL5)

1501.5

Analysis of Trusses and to understand the concepts of mechanical vibrations. (BTL4)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1501.1	3	2	1	1	1	1	-	1	-	1	-	2	3	1
1501.2	3	2	2	1	1	1	-	1	-	1	-	2	3	1
1501.3	3	1	1	-	1	1	-	1	-	1	-	2	3	1
1501.4	3	2	2	1	1	1	-	1	-	1	-	2	3	1
1501.5	3	2	2	1	1	1	-	1	-	1	-	2	3	1
AVG	3	2	2	1	1	1	-	1	-	1	-	2	3	1

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COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: I-II

Reg: R15

AY:

Course Code:

Course Name: Engineering Chemistry

L	T	P	C
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15A51101

Prerequisite: None

3	0	0	3
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COURSE OUTCOMES (COs)

CO No.	COURSE OUTCOME
1101.1	Differentiate between hard and soft water.(BTL3)
1101.2	Discuss BUNA-S and BUNA-N Elastomers (BTL2)
1101.3	Understand the electrochemical sources of energy. (BTL3)
1101.4	Discuss about solid, liquid, gaseous fuels (BTL2)
1101.5	Understand the principles of lubricants and CNTs (BTL2)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1101.1	3	3	3	2	2	2			2		3	2	3	
1101.2	2	2	3	3		1	1					2		2
1101.3	3	2	3	2			3		1				3	
1101.4	2	2	2	2							1		2	2
1101.5	2	1	1	2		1							2	
AVG	2	2	2	2	2	1	2		2		2	2	3	2

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: I-II

Reg: R15

AY:

Course Code:

Course Name: Environmental Studies

L	T	P	C
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15A01101

Prerequisite: None

3	0	0	3
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COURSE OUTCOMES (COs)


CO No.	COURSE OUTCOME
1101.1	Understand the various natural resources (BTL2)
1101.2	Describe about the Biodiversity and Ecosystem (BTL2)
1101.3	Discuss about the pollution aspects (BTL3)
1101.4	To know about the social issues related to environment and their protection acts (BTL1)
1101.5	Describe about the population explosion and welfare programme (BTL2)


Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

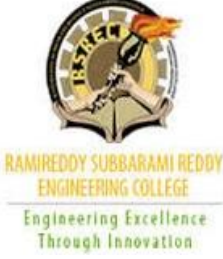
COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1101.1	3	2	3	2	3		2		2				2	2
1101.2	2	2	3	2		2	3						3	
1101.3	3	2	3	2			2					3	3	2
1101.4	2	2	3	2			2	2						3
1101.5	2	2	3	2	3		3					3		3
AVG	2	2	3	2	3	2	2	2	2			3	3	3


3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-II				Reg: R15				AY:						
Course Code:	Course Name: Mathematics – II											L	T	P	C
15A54201	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
4201.1	Understand the usage of Laplace Transforms. (BTL2)														
4201.2	Evaluate the Fourier Series expansion of periodic functions. (BTL5)														
4201.3	Understand the usage of Fourier Transforms. (BTL2)														
4201.4	Formulate/Solve/Classify the solutions of P.D. Equations and also find the solutions of 1-Dimensional Wave equations and Heat equations. (BTL6)														
4201.5	Understand the usage of Z-Transforms. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
4201.1	3	2	2	2	-	-	-	-	-	-	-	1	2	3	
4201.2	2	3	2	2	-	-	-	-	-	-	-	1	2	2	
4201.3	3	2	2	2	-	-	-	-	-	-	-	1	2	2	
4201.4	3	2	2	2	-	-	-	-	-	-	-	-	3	2	
4201.5	3	2	2	2	-	-	-	-	-	-	-	1	2	2	
AVG	3	2	2	2	-	-	-	-	-	-	-	1	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-II				Reg: R15				AY:						
Course Code:	Course Name: Applied Mechanics Lab											L	T	P	C
15A01202	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1202.1	To study and verify the equilibrium of 1)a concurrent coplanar force system and 2)a parallel forces system. (BTL-3)														
1202.2	Verification of Principle of moments. (BTL-3)														
1202.3	To understand the concept of friction and to estimate the coefficient of friction. (BTL-3)														
1202.4	To understand the kinetics of rigid body rotation and to estimate the acceleration due to gravity. (BTL-3)														
1202.5	To understand and establish the law of machines. (BTL-2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1202.1	3	1	2	-	1	2	-	-	3	-	-	2	3	1	
1202.2	3	1	2	-	1	2	-	-	3	-	-	2	3	1	
1202.3	3	1	2	-	1	2	-	-	3	-	-	2	3	1	
1202.4	3	1	1	-	1	2	-	-	3	-	-	2	3	1	
1202.5	2	1	2	-	1	2	-	-	3	-	-	2	3	1	
AVG	3	1	2	-	1	2	-	-	3	-	-	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															


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	DEPARTMENT OF HUMANITIES AND SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-II				Reg: R15				AY:						
Course Code:	Course Name: ENGINEERING CHEMISTRY LAB											L	T	P	C
15A51102	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
51102.1	Determine the calorific value of fuel and viscosity of the oils.(BTL3)														
51102.2	Estimate the ferrous iron and copper iodometry. (BTL2)														
51102.3	Estimate the hardness of water and copper by EDTA method. (BTL3)														
51102.4	Measure the manganese in steel and iron in cement. (BTL3)														
51102.5	Illustrate the concentration values of different solutions by conductometry. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
51102.1	3	2	2	1	2	2			3		2	2	2	2	
51102.2	3	2			2				3				3		
51102.3	2	3	2		3				2				3	2	
51102.4	2	2			3				2					3	
51102.5	3	2		1			2		3					3	
AVG	3	2	2	1	3	2	2		3		2	2	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															


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	DEPARTMENT OF HUMANITIES & SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: I-II				Reg: R15				AY:						
Course Code	Course Name: Engineering &IT workshop											L	T	P	C
15A99201	Prerequisite: NIL											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
99201.1	To provide Technical training to the students on Productivity tools like Word processors, Spreadsheets, Presentations (BTL2)														
99201.2	To make the students know about the internal parts of a computer, assembling a computer from the parts, preparing a computer for use by installing the operating system (BTL2)														
99201.3	To learn about Networking of computers and use Internet facility for Browsing and Searching. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
Cos	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
99201.1	3	1	3	1	3	-	-	-	3	-	3	1	2	1	
99201.2	3	1	3	2	3	-	-	-	3	-	3	1	2	2	
99201.3	3	1	3	1	3	-	-	-	3	-	3	3	2	2	
AVG	3	1	3	1	3	-	-	-	3	-	3	2	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															


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	DEPARTMENT OF HUMANITIES AND SCIENCES														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-I				Reg: R15					AY:					
Course Code:	Course Name: MATHEMATICS-III											L	T	P	C
15A54301	Prerequisite: NONE											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
4301.1	Able to analyze engineering problems using the concepts of Matrices and Numerical methods.														
4301.2	Able to analyze engineering problems using the concepts of Matrices and Numerical methods.														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
4301.1	2	2	2	1	-	-	-	-	-	-	-	1	2	2	
4301.2	2	2	2	1	-	-	-	-	-	-	-	1	2	2	
AVG	2	2	2	1			0	0	0	0	0	1	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-I				Reg: R15				AY:						
Course Code:		Course Name: Building Materials and Construction										L	T	P	C
15A01302		Prerequisite: None										3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1302.1	To understand the characteristics of various building materials such as stone and clay product. (BTL2)														
1302.2	To identify and apply the national standards in glass and plastic materials in building construction. (BTL4)														
1302.3	To identify the thermal insulation material for construction activities. (BTL4)														
1302.4	To understand the construction procedure of various building components such as stair cases, masonry and flooring. (BTL2)														
1302.5	To Identify and select the materials for finishes and internal construction activities. (BTL4)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1302.1	-	-	-	1	2	-	2	-	-	-	1	1	1	-	
1302.2	-	-	1	-	2	-	2	-	-	-	1	1	-	-	
1302.3	1	-	1	-	1	-	1	-	-	-	-	-	-	1	
1302.4	1	-	1	1	2	-	-	-	1	1	-	-	1	-	
1302.5	1	1	-	1	1	1	1	-	1	-	1	-	1	2	
AVG	1	1	1	1	2	1	1	-	1	1	1	1	1	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-I				Reg: R15				AY:						
Course Code:		Course Name: Strength of Materials –1										L	T	P	C
15A01303		Prerequisite: None										3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1303.1	To Understand the concepts of stress and strain at a point as well as the stress-strain relationships for homogenous, isotropic materials (BTL2)														
1303.2	To Derive the concept SFD and BMD. Apply S.F and B.M concept on cantilever beam with point load and UDL. (BTL3)														
1303.3	To Apply the concept of Pure bending, Evaluate the bending stress and section modulus rectangular and circular sections also Understanding concept of Shear stress distribution. (BTL3)														
1303.4	To Understanding concept of slope and deflection for a circular arc. (BTL2)														
1303.5	To Apply the design principles for the design of dam, chimneys, retaining walls, which are subjected to both direct and bending stresses. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
Cos	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1303.1	3	3	1	2	-	-	1	-	-	-	-	1	3	2	
1303.2	3	3	3	3	-	1	-	-	1	1	-	2	3	2	
1303.3	2	3	3	1	-	-	-	-	1	-	1	1	2	3	
1303.4	3	3	3	2	-	-	-	-	1	1	-	2	2	2	
1303.5	3	3	3	3	-	1	-	-	1	1	1	2	2	3	
AVG	3	3	2	2	-	1	1	-	1	1	1	2	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-I				Reg: R15				AY:						
Course Code:	Course Name: SURVEYING-I											L	T	P	C
15A01304	Prerequisite: None											3	1	0	3
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1304.1	To Understand the working principles of survey instruments and Identify data collection methods, prepare field notes and maps. (BTL2)														
1304.2	To Explain correctly the basics and methods of measuring distance, bearing and angle. (BTL2)														
1304.3	To Measure the horizontal distances, difference in elevations, draw and use contour plots. (BTL3)														
1304.4	To Assess errors and apply corrections. (BTL3)														
1304.5	To Interpret survey data and compute areas and volumes (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1304.1	3	2	2	-	-	2	3	1	-	-	2	1	3	2	
1304.2	3	1	2	1	-	2	3	1	-	-	-	1	3	1	
1304.3	3	3	2	-	-	2	3	1	-	-	-	1	3	2	
1304.4	3	3	3	1	-	2	3	-	-	-	-	1	3	2	
1304.5	2	2	2	-	2	2	3	-	-	-	2	1	3	1	
AVG	3	2	2	1	2	2	3	1	-	-	2	1	3	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-I				Reg: R15				AY:						
Course Code:		Course Name: Fluid Mechanics										L	T	P	C
15A01305		Prerequisite: None										3	0	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1305.1	To Understand the basic concepts and characteristics of static fluids, kinematic and dynamics of fluid and their behavioural properties. (BTL2)														
1305.2	To Impart factual and conceptual knowledge on different types and the characteristics of flow in pipes (BTL1)														
1305.3	To Interpret the fundamentals which will be helpful in engineering application intensive courses like Hydraulics and hydraulic machinery. (BTL3)														
1305.4	To Understand how to execute the integral forms of governing laws of fluid mechanics to predict relevant pressures, velocities and forces. (BTL2)														
1305.5	To Familiarize with various flow measuring devices, their classification and the working principles. (BTL1)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1305.1	3	3	1	2	-	1	1	3	1	1	-	1	3	3	
1305.2	3	3	2	2	-	1	1	3	1	1	-	1	3	2	
1305.3	3	3	3	2	-	1	1	3	2	3	-	1	3	3	
1305.4	3	3	3	2	-	1	1	3	2	3	-	1	3	3	
1305.5	3	3	3	1	-	1	1	3	1	3	-	1	3	3	
AVG	3	3	2	2	-	1	1	3	1	2	-	1	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-I				Reg: R15				AY:						
Course Code:	Course Name: Surveying Lab – I											L	T	P	C
15A01306	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1306.1	To Able to measure difference in elevation, length, calculate the area of a land and prepare the map. (BTL3,4 & 6)														
1306.2	To Apply the principle of surveying for civil Engineering Applications like Calculation of areas, drawing plans and contour maps using different measuring equipment at field level. (BTL3)														
1306.3	To Apply conventional surveying tools such as chain/tape, compass, plane table, level in the field of civil engineering applications such as structural plotting and highway profiling (BTL3)														
1306.4	To Apply the Longitudinal sectioning and cross sectioning in the field. (BTL3)														
1306.5	To Formulate the two-point problem, and three-point problem in drawing sheet. (BTL6)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1306.1	3	3	3	2	3	1	2	-	3	2	1	2	2	3	
1306.2	3	2	1	1	2	2	1	-	2	1	2	2	3	2	
1306.3	2	3	2	3	3	1	-	-	3	2	1	2	2	3	
1306.4	2	1	2	1	2	1	-	-	2	-	-	1	1	1	
1306.5	2	-	1	1	2	2	-	-	3	1	-	1	3	2	
AVG	2	2	2	1	2	1	1	-	3	2	1	2	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-I				Reg: R15				AY:						
Course Code:	Course Name: Strength of Materials Lab											L	T	P	C
15A01307	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1307.1	To understand the behaviour of materials (steel) under tension. (BTL-3)														
1307.2	To study the bending behaviour of beams under lateral loads. (BTL-3)														
1307.3	To estimate the hardness and toughness of metals. (BTL-3)														
1307.4	To study and understand the behaviour of materials under compression. (BTL-3)														
1307.5	To study and understand the behaviour of materials when subjected to twisting. (BTL-3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1307.1	3	2	1	-	2	1	-	1	2	-	-	2	3	1	
1307.2	3	2	1	-	2	1	-	1	2	-	-	2	3	1	
1307.3	3	2	1	-	1	1	-	1	1	-	-	2	3	1	
1307.4	3	2	1	-	1	1	-	1	2	-	-	2	3	1	
1307.5	3	2	1	-	2	1	-	1	2	-	-	2	3	1	
AVG	3	2	1	-	2	1	-	2	2	-	-	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15				AY:						
Course Code:	Course Name: Probability and Statistics											L	T	P	C
15A54401	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
4401:1	Analyze the problems of engineering & industry using the techniques of testing of hypothesis, Statistical Quality Control and Queuing theory and draw appropriate inferences.														
4401:2	Analyze the problems of engineering & industry using the techniques of testing of hypothesis, Statistical Quality Control and Queuing theory and draw appropriate inferences.														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
4401.1	2	2	2	1	-	-	-	-	-	-	-	1	2	1	
4401.2	2	2	2	1	-	-	-	-	-	-	-	1	2	1	
AVG	2	2	2	1	0	0	0	0	0	0	0	1	2	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15				AY:						
Course Code:	Course Name: Strength of Materials – II											L	T	P	C
15A01401	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1401.1	To Determine and illustrate principal stresses, maximum shearing stress, and the stresses acting on a structural member. (BTL3)														
1401.2	To Able to calculate the stresses induced in thin cylinders and thick cylinders and obtain safe dimensions. (BTL3)														
1401.3	To Understanding concept of Theory of pure torsion. (BTL2)														
1401.4	To Understand the failure phenomenon of columns and struts and finding the stresses developed in them. (BTL2)														
1401.5	To Able to calculate the stresses developed in a beam subjected to unsymmetrical bending and also find shear center. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1401.1	3	3	2	1	-	1	-	-	2	1	2	1	2	3	
1401.2	2	2	2	1	-	-	-	-	2	1	2	1	2	3	
1401.3	2	3	3	1	1	-	-	-	2	1	-	1	3	2	
1401.4	3	3	3	2	1	-	-	-	3	2	2	3	2	2	
1401.5	1	2	1	1	-	-	-	-	1	2	-	1	2	2	
AVG	2	3	2	1	1	1	-	-	2	1	2	1	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



**RAMIREDDY SUBBARAMI REDDY
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Engineering Excellence
Through Innovation

RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

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NH-16, Kadanuthala, Bogole Mandal, Kavali- 524 142, S.P.S.R. Nellore, A.P.)

DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: II-II

Reg: R15

AY:

Course Code:

Course Name: Strength of Materials – II

L

T

P

C

15A01401

Prerequisite: None

3

1

0

3

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1401.1

To Determine and illustrate principal stresses, maximum shearing stress, and the stresses acting on a structural member. (BTL3)

1401.2

To Able to calculate the stresses induced in thin cylinders and thick cylinders and obtain safe dimensions. (BTL3)

1401.3

To Understanding concept of Theory of pure torsion. (BTL2)

1401.4

To Understand the failure phenomenon of columns and struts and finding the stresses developed in them. (BTL2)


1401.5


To Able to calculate the stresses developed in a beam subjected to unsymmetrical bending and also find shear center. (BTL3)


Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)


COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1401.1	3	3	2	1	-	1	-	-	2	1	2	1	2	3
1401.2	2	2	2	1	-	-	-	-	2	1	2	1	2	3
1401.3	2	3	3	1	1	-	-	-	2	1	-	1	3	2
1401.4	3	3	3	2	1	-	-	-	3	2	2	3	2	2
1401.5	1	2	1	1	-	-	-	-	1	2	-	1	2	2
AVG	2	3	2	1	1	1	-	-	2	1	2	1	2	2


3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15				AY:						
Course Code:	Course Name: Managerial Economics & Financial Analysis											L	T	P	C
15A52301	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
2301.1	Understand the basic concepts of Managerial economics. (BTL2)														
2301.2	Explain the concepts of cost and production and can calculate the breakeven point. (BTL2)														
2301.3	Apply the Concept of Production cost and revenues for effective Business decision. (BTL3)														
2301.4	Prepare and evaluate the financial statements. (BTL5)														
2301.5	Analyze how to invest their capital and maximize returns. (BTL4)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
2301.1	2	-	-	-	2	1	-	-	-	-	-	1	-	-	
2301.2	3	-	1	-	-	2	-	-	-	-	-	2	2	2	
2301.3	2	-	-	-	-	1	-	-	-	-	-	1	-	-	
2301.4	2	-	-	-	2	1	-	2	-	-	-	1	-	-	
2301.5	2	-	1	-	2	1	-	-	-	-	-	1	-	-	
AVG	2	-	1	-	2	1	-	2	-	-	-	1	2	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low-															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15					AY:					
Course Code:	Course Name: Surveying – II											L	T	P	C
15A01402	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1402.1	To Explain the reciprocal observations. (BTL2)														
1402.2	To Apply the knowledge of principles and purpose of Tacheometry in finding out the constants. (BTL3)														
1402.3	To Understand the need for checks and systems in the Quality Assurance process. (BTL2)														
1402.4	To Prepare to set out simple circular curves. (BTL6)														
1402.5	To Interpret the basic principles of total station, GPS and GIS in civil engineering. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1402.1	3	2	2	-	-	2	3	1	-	-	2	1	3	2	
1402.2	3	1	2	1	-	2	3	1	-	-	-	1	3	1	
1402.3	3	3	2	-	-	2	3	1	-	-	-	1	3	2	
1402.4	3	3	3	1	-	2	3	-	-	-	-	1	3	2	
1402.5	2	2	2	-	2	2	3	-	-	-	2	1	3	1	
AVG	3	2	2	1	2	2	3	1	-	-	2	1	3	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15				AY:						
Course Code:		Course Name: Structural Analysis -I										L	T	P	C
15A01403		Prerequisite: None										3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1403.1	To Apply energy theorems for analysis of indeterminate structures. (BTL3)														
1403.2	To Differentiate determinate and indeterminate structures and Understand static and kinematic indeterminacies with truss problems. (BTL4)														
1403.3	To Analyze the beams subjected to loads and Study effect of sinking of supports of performance. (BTL4)														
1403.4	To Analyze beams and frames by using slope deflection method. (BTL4)														
1403.5	To Analyze beams and frames by using moment distribution method. (BTL4)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1403.1	3	2	1	1	1	1	-	1	-	1	-	2	3	1	
1403.2	3	2	1	1	1	1	-	-	-	1	-	2	3	1	
1403.3	3	3	1	1	1	1	-	2	-	1	-	2	3	1	
1403.4	3	3	1	1	1	1	-	1	-	1	-	2	3	1	
1403.5	3	3	1	1	1	1	-	1	-	1	-	2	3	1	
AVG	3	3	1	1	1	1	-	1	-	1	-	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15				AY:						
Course Code:	Course Name: Hydraulics & Hydraulic Machinery											L	T	P	C
15A01404	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1404.1	Introduce the concept of flow through open channel; understand how it is different from pipe flow and their applications in real life. (BTL2)														
1404.2	Understand the variation of flow parameters for different types of flow, variation of velocity and pressure distribution in open channel. (BTL2)														
1404.3	Familiarize hydraulic machines, turbines and understand the working principles and designs of these machines and the turbines. (BTL1)														
1404.4	Familiarize pumps and understand their working principles and design the centrifugal and multi stage pumps. (BTL1)														
1404.5	Execute/ implement the conceptual knowledge learned in fluid mechanics for practical engineering related problems. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1404.1	3	3	1	2	-	1	1	3	1	1	-	1	3	3	
1404.2	3	3	2	2	-	1	1	3	1	1	-	1	3	2	
1404.3	3	3	3	2	-	1	1	3	2	3	-	1	3	3	
1404.4	3	3	3	2	-	1	1	3	2	3	-	1	3	3	
1404.5	3	3	3	1	-	1	1	3	1	3	-	1	3	3	
AVG	3	3	2	2	-	1	1	3	1	2	-	1	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15					AY:					
Course Code:	Course Name: Fluid Mechanics and Hydraulic Machines Lab											L	T	P	C
15A01405	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1405.1	To Determine the fluid flow principles in orifice and Venturi meter. (BTL3)														
1405.2	To Calculate Coefficient of discharge for orifice and mouth piece. (BTL3)														
1405.3	To Analyse the Calibration of contracted Rectangular Notch and /or Triangular Notch. (BTL4)														
1405.4	To Understand the Study of Hydraulic jump at various points. (BTL2)														
1405.5	To Determine the Efficiency test on Centrifugal Pump and performance test on Pelton wheel and Francis turbine. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1405.1	3	2	-	2	3	1	1	3	3	3	-	1	3	1	
1405.2	3	2	-	2	3	1	1	3	3	3	-	1	3	1	
1405.3	3	2	-	2	3	1	1	3	3	3	-	1	3	1	
1405.4	3	2	-	2	3	1	1	3	3	3	-	1	3	1	
1405.5	3	2	-	1	3	1	1	3	3	3	-	1	3	1	
AVG	3	2	-	2	3	1	1	3	3	3	-	1	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15				AY:						
Course Code:	Course Name: Surveying Lab-II											L	T	P	C
15A01406	Prerequisite: None											0	0	4	2
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1406.1	Able to use Theodolite for traversing and analysis of field data. (BTL3)														
1406.2	Able to use Total Station for traversing, leveling and contouring. (BTL3)														
1406.3	Able to setting out Simple Curve in field. (BTL3)														
1406.4	Study of parts of a Transit Theodolite and its temporary adjustments. (BTL2)														
1406.5	Understand how advances in technology have affected surveying practice. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1406.1	2	2	1	-	-	2	2	1	1	-	-	1	3	1	
1406.2	3	2	2	1	-	2	1	-	2	-	1	1	3	1	
1406.3	3	2	2	-	-	2	1	1	2	-	-	1	2	1	
1406.4	2	3	2	1	-	2	-	-	2	-	1	1	2	1	
1406.5	3	2	2	1	-	2	1	1	2	-	1	1	3	2	
AVG	3	2	2	1	-	2	1	1	2	-	1	1	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: II-II				Reg: R15				AY:						
Course Code:	Course Name: Comprehensive Online Examination-I											L	T	P	C
15A01407	Prerequisite: None											0	0	0	1
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1407.1	To Apply the knowledge of energy theorms in structural analysis concepts. (BTL3)														
1407.2	To Apply unit load method to find the deflection of truss. (BTL3)														
1407.3	To Explain the basic concepts of probabality, random variables and solve real time problems using Baye’s theorem. (BTL2)														
1407.4	To Predict the demand of a product by using demand forecasting methods and formulate the setting out of curve by linear and angular methods. (BTL3)														
1407.5	To Design open channels for most economical sections like rectangular, trapezoidal and circular sections (BTL6)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1407.1	2	2	1	-	-	2	2	1	1	-	-	1	3	1	
1407.2	3	2	2	1	-	2	1	-	2	-	1	1	3	1	
1407.3	3	2	2	-	-	2	1	1	2	-	-	1	2	1	
1407.4	2	3	2	1	-	2	-	-	2	-	1	1	2	1	
1407.5	3	2	2	1	-	2	1	1	2	-	1	1	3	2	
AVG	3	2	2	1	-	2	1	1	2	-	1	1	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-I				Reg: R15				AY:						
Course Code:	Course Name: Design & Drawing of RCC Structures											L	T	P	C
15A01501	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1501.1	To understand the Concepts of Limit State Method of design of RCC structures and Design of beams for flexure. (BTL6)														
1501.2	Limit state analysis and design of sections for shear and torsion and to understand and apply the concept of bond and Anchorage. (BTL6)														
1501.3	To understand the performance and hence, design of slabs. (BTL-6)														
1501.4	Analysis and design of columns subjected to different loads adopting IS Code. (BTL6)														
1501.5	Design of isolated and combined footings and their adoptability. (BTL6)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1501.1	3	2	2	1	1	1	-	1	-	-	-	2	3	1	
1501.2	3	1	2	1	1	1	-	2	-	-	-	2	3	1	
1501.3	3	2	1	1	1	1	-	2	-	-	-	2	3	1	
1501.4	3	2	2	-	1	1	-	2	-	-	-	2	3	1	
1501.5	3	2	1	1	1	1	-	2	-	-	-	2	3	1	
AVG	3	2	2	1	1	1	-	2	-	-	-	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															


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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-I				Reg: R15				AY:						
Course Code:	Course Name: Estimation, Costing and Valuation											L	T	P	C
15A01502	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1502.1	To Understand Standard specifications for different items of building construction. (BTL2)														
1502.2	To prepare a detailed estimate for various buildings. (BTL3)														
1502.3	To Estimate different volumes of earthwork for roads and canals and to prepare bar bending schedules. (BTL3)														
1502.4	To prepare tender documents, rate analysis, schedule of rates, specifications and contracts. (BTL1)														
1502.5	To evaluate the overhead charge, contingent charges and estimate for building valuation. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1502.1	3	3	2	2	-	3	3	3	-	1	3	2	3	3	
1502.2	3	3	2	2	-	3	3	3	-	1	3	2	3	3	
1502.3	3	3	2	2	-	3	3	3	-	1	3	2	3	3	
1502.4	3	1	1	2	-	3	3	3	-	1	3	2	3	3	
1502.5	3	3	2	2	-	3	3	3	-	1	3	2	3	3	
AVG	3	3	2	2	-	3	3	3	-	1	3	2	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

 <p>RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE Engineering Excellence Through Innovation</p>	RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE														
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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-I				Reg: R15				AY:						
Course Code:	Course Name: GEOTECHNICAL ENGINEERING -I											L	T	P	C
15A01503	Prerequisite: None											3	1	0	3
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1503.1	To classify soil for engineering purpose and determine the index properties of soil. (BTL4)														
1503.2	To analyze the concept of Seepage, effective stress and to assess permeability of soil. (BTL4)														
1503.3	To investigate the stress behaviour of soil under various loading condition. (BTL4)														
1503.4	To assess consolidation settlement and incorporate various compaction methods. (BTL3)														
1503.5	To impart knowledge on shear strength of soil and tests to analyse soil behaviour. (BTL1)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1503.1	3	3	1	-	-	-	2	-	-	-	1	1	3	3	
1503.2	2	2	2	2	-	-	1	-	-	-	1	1	3	3	
1503.3	2	3	3	2	1	1	2	-	-	-	1	1	3	3	
1503.4	2	2	2	2	2	1	2	-	-	-	1	1	3	2	
1503.5	3	3	2	2	1	1	2	-	-	-	1	1	3	2	
AVG	2	3	2	2	2	1	2	-	-	-	1	1	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-I				Reg: R15				AY:						
Course Code:	Course Name: Engineering Geology											L	T	P	C
15A01504	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1504.1	Understanding the principles of engineering geology and weathering mechanism and Identification of different types of minerals and their properties. (BTL2)														
1504.2	Identify the different types rocks and their properties. (BTL4)														
1504.3	Understanding the ground water, earth quake & land slide in terms of civil engineering construction. (BTL2)														
1504.4	Evaluation of Geophysical studies and its importance (BTL4)														
1504.5	Understanding about the different type of dams,reservoirs and tunnels. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1504.1	3	1	1	1	1	1	-	1	-	1	-	2	3	1	
1504.2	3	1	1	1	1	1	-	2	-	1	-	2	3	1	
1504.3	3	1	1	1	1	1	-	2	-	1	-	2	3	1	
1504.4	3	1		-	1	1	-	2	-	1	-	2	3	1	
1504.5	3	2	1	1	1	1	-	2	-	1	-	2	3	1	
AVG	3	1	1	1	1	1	-	2	-	1	-	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-I				Reg: R15				AY:						
Course Code:	Course Name: Structural Analysis -II											L	T	P	C
15A01505	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1505.1	Analyze bending moment, normal thrust and radial shear in the arches. (BTL4)														
1505.2	Analyze beams and frames by using slope deflection and moment distribution methods. (BTL4)														
1505.3	Using kani's method for analysis of indeterminate structures. (BTL3)														
1505.4	Able to calculate forces in members of truss due to load by stiffness method and flexibility methods. (BTL3)														
1505.5	Analyze the formation of plastic hinges in different mechanisms (BTL4)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1505.1	3	2	1	1	1	1	-	1	-	1	-	2	3	1	
1505.2	3	2	1	1	1	1	-	-	-	1	-	2	3	1	
1505.3	3	3	1	1	1	1	-	2	-	1	-	2	3	1	
1505.4	3	3	1	1	1	1	-	1	-	1	-	2	3	1	
1505.5	3	3	1	1	1	1	-	1	-	1	-	2	3	1	
AVG	3	3	1	1	1	1	-	1	-	1	-	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-I				Reg: R15				AY:						
Course Code:	Course Name: Cost Effective Housing Techniques											L	T	P	C
15A01506	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1506.1	To understand the national housing policies and sustainable housing. (BTL2)														
1506.2	To explore the role of public housing agencies and private sectors in housing programmes. (BTL3)														
1506.3	To understand the concept of development and adoption of Low-cost Housing technology. (BTL2)														
1506.4	To Explore the alternative building materials for low-cost housing and infrastructure services in rural houses. (BTL3)														
1506.5	To adopt the suitable techniques in rural and disaster-prone areas by using locally available materials. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1506.1	1	1	2	-	1	2	3	1	-	-	2	2	-	-	
1506.2	-	1	3	-	-	1	2	1	-	1	1	1	-	2	
1506.3	1	2	1	1	-	-	1	-	-	-	1	1	-	1	
1506.4	-	2	1	-	-	1	3	-	1	2	2	2	1	1	
1506.5	2	2	2	-	1	-	1	-	2	-	1	1	2	-	
AVG	1	1	2	1	1	1	2	1	1	1	1	1	1	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-I				Reg: R15				AY:						
Course Code:	Course Name: GEOTECHNICAL ENGINEERING LAB											L	T	P	C
15A01509	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1509.1	To Identify the soil properties and classification by using Atterberg's limit, grain size analysis. (BTL4)														
1509.2	To Calculate the Field and Dry Density of Cohesion-less and Cohesive soils. (BTL3)														
1509.3	To Determine the Coefficient of Permeability of Coarse grained and Fine-grained soils& also Compressibility Characteristics of Soil. (BTL3)														
1509.4	To Evaluate the Shear Strength Parameters of Soil by Direct shear test, UCC test, Vane shear test, Triaxial shear test. (BTL5)														
1509.5	To Demonstrate various Experiments on Consolidation of Soil. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1509.1	2	3	1	2	-	-	-	1	-	-	1	-	3	2	
1509.2	2	3	2	2	-	-	-	1	-	-	1	-	3	1	
1509.3	2	3	2	2	-	-	-	1	-	-	1	-	3	2	
1509.4	2	3	2	2	-	-	-	1	-	-	1	-	3	1	
1509.5	2	-	-	3	-	-	-	1	-	-	2	-	3	1	
AVG	3	3	1	1	1	1	-	1	-	1	-	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: III-I

Reg: R15

AY:

Course Code:

Course Name: Engineering Geology Laboratory

L

T

P

C

15A01508

Prerequisite: None

0

0

4

2

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1508.1

To Interpret the knowledge of principles of engineering geology (BTL3)

1508.2

To Identify the physical properties of Minerals and Rocks in the laboratory (BTL4)

1508.3

To Justify the suitability of sites for various civil engineering structures (BTL5)

1508.4

To Explain the knowledge for use of geological strata in the analysis and design the civil engineering structures (BTL2)

1508.5

To Describe the suitability of water and soil conservation projects (BTL2)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1508.1	3	2	-	2	3	3	3	2	3	3	-	1	3	1
1508.2	2	2	-	2	3	3	3	2	3	3	-	1	3	1
1508.3	2	1	-	2	2	3	3	2	3	3	-	1	3	1
1508.4	3	2	-	2	3	2	3	2	3	3	-	1	3	1
1508.5	2	2	-	2	3	3	3	2	3	3	-	1	3	1
AVG	2	2	-	2	3	3	3	2	3	3	-	1	3	1

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: III-I

Reg: R15

AY:

Course Code:

Course Name: Social values & Ethics

L

T

P

C

15A99501

Prerequisite: None

2

0

2

0

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

99501.1

To Differentiate between Basic Concepts of Family and Society (BTL4)

99501.2

To Analyse about Social Harmony and National Integration (BTL4)

99501.3

To Understand the knowledge about Environment Issues (BTL2)

99501.4

To Explain about Gender Sensitization, Civil/ Self Defence (BTL2)


99501.5

To Differentiate between Physical, Psychological, Social problems also To Differentiate between- Kriyas, Bandhas and Mudras (BTL4)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
99501.1						3		3	1			2		
99501.2						3		2	1			2		
99501.3			1			3		3	1			1		
99501.4						3		3	1			2		
99501.5						3		3	1			2		
AVG	-	-	1	-	-	3	-	3	1	-	-	2	-	-

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-II				Reg: R15				AY:						
Course Code:	Course Name: CONCRETE TECHNOLOGY											L	T	P	C
15A01601	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1601.1	Understand the functional role of ingredients of concrete and implement this knowledge to mix design philosophy. (BTL2)														
1601.2	Impart conceptual knowledge on the properties of fresh and hardened concrete. (BTL3)														
1601.3	Explain the behaviour of concrete in fresh and hardened state by the variation of ingredients of concrete. (BTL2)														
1601.4	Inculcate the testing methodology to evaluate the properties of concrete during fresh and hardened state. (BTL2)														
1601.5	Impart knowledge on the special concrete and design mix. Execute this knowledge to design a mix according to the required properties. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1403T.1	3	-	-	3	-	3	3	3	-	1	1	2	3	3	
1403T.2	3	-	-	3	-	3	3	3	-	1	1	2	3	3	
1403T.3	3	1	-	3	-	3	3	3	-	1	1	2	3	3	
1403T.4	3	-	-	3	-	3	3	3	-	1	1	2	3	3	
1403T.5	3	2	3	3	-	3	2	3	-	1	1	2	3	3	
AVG	3	2	3	3	-	3	3	3	-	1	1	2	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: III-II

Reg: R15

AY:

Course Code:

Course Name: Design & Drawing of Steel Structures

L

T

P

C

15A01602

Prerequisite: None

3

1

0

3

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1602.1

To understand and design the Bolted and welded connections to tension members. (BTL6)

1602.2

To understand the behaviour and also design the compression members. (BTL6)

1602.3

Analysis and design of flexural members and detailing. (BTL6)

1602.4

Design of different connections used in steel structures. (BTL6)


1602.5

To Understand and Design of Plate & Gantry girders. (BTL6)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1602.1	3	1	1	1	1	1	-	1	-	-	-	2	3	1
1602.2	3	2	2	1	1	1	-	2	-	-	-	2	3	1
1602.3	3	2	2	1	1	1	-	2	-	-	-	2	3	1
1602.4	3	2	2	-	1	1	-	2	-	-	-	2	3	1
1602.5	3	2	1	1	1	1	-	2	-	-	-	2	3	1
AVG	3	2	2	1	1	1	-	2	-	-	-	2	3	1

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-II				Reg: R15				AY:						
Course Code:	Course Name: Geotechnical Engineering – II											L	T	P	C
15A01603	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1603.1	To recommend an appropriate site investigation programme for any construction. (BTL3)														
1603.2	To Explain about the failure of slopes in different zones of soils. (BTL2)														
1603.3	To determine the various types of earth pressure and stability of retaining structures. (BTL3)														
1603.4	To explore the bearing capacity of soil for different types of shallow foundation with different conditions. (BTL3)														
1603.5	To examine the load carrying capacity & settlement of piles. (BTL4)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1603.1	3	3	2	3	2	1	2		1		1	1	3	1	
1603.2	3	2	2	3	1	1	2		1		1	1	3	1	
1603.3	2	3	3	3	2	1	2		2		1	1	3	1	
1603.4	3	3	3	3	2	1	2		1		1	1	3	1	
1603.5	3	2	2	3	3	1	2		2		1	1	3	1	
AVG	3	3	2	3	2	1	2	-	1	-	1	1	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: III-II

Reg: R15

AY:

Course Code:

Course Name: Transportation Engineering - I

L

T

P

C

15A01604

Prerequisite: None

3

1

0

3


COURSE OUTCOMES (COs)

CO No.	COURSE OUTCOME
1604.1	Understanding the highway planning and development (BTL2)
1604.2	Analyze various types of road cross sectional elements and to calculate radius and extra widening of horizontal curves and vertical curves. Analysing the various sight distance elements (BTL4)
1604.3	Understand the traffic engineering regulations with basic parameters of traffic and to evaluate different types of traffic studies. (BTL2)
1604.4	Explain Design Intersections and prepare traffic management plans (BTL2)
1604.5	Explore concept of rotary and design factors of rotary and other at grade intersections (BTL3)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1604.1	3	3	3	3	1	1	3	1	2	-	1	3	3	1
1604.2	3	2	3	2	2	1	2	1	2	-	1	2	3	1
1604.3	3	2	2	2		1	2	1	2	-	1	3	3	1
1604.4	3	3	3	3		1	2		2	-	1	2	3	1
1604.5	3	2	2	3	1	1	2		2	-	1	1	3	
AVG	3	2	3	3	1	1	2	1	2	-	1	2	3	1

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

 <p>RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE Engineering Excellence Through Innovation</p>	RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE														
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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-II				Reg: R15				AY:						
Course Code:	Course Name: Water Resources Engineering – I											L	T	P	C
15A01605	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1605.1	To Analyse the concepts of Engineering Hydrology and its applications. (BTL4)														
1605.2	To prepare a unit Hydrograph and to design Runoff estimation, estimation of design discharge and flood routing. (BTL6)														
1605.3	To Understand the basic types of irrigation, irrigation standards and crop water assessment. (BTL2)														
1605.4	To design an irrigation channel based on silt theories. (BTL6)														
1605.5	To understand various hydraulic structures such as diversion head works and cross regulators, canal falls and structures involved in cross drainage works (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1605.1	3	3	3	3	3	1	3	1	2	1	1	3	3	2	
1605.2	3	3	2	3	2	1	3	1	2	1	1	2	3	2	
1605.3	3	3	2	3	3	1	3		2			3	3	2	
1605.4	2	3	3	3	3	1	3	1	3	1	1	3	3	2	
1605.5	3	2	2	3	2	1	3		2	1	1	2	3	2	
AVG	3	3	2	3	3	1	3	1	2	1	1	3	3	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: III-II

Reg: R15

AY:

Course Code:

Course Name: Disaster Management & Mitigation

L

T

P

C

15A01607

Prerequisite: None

3

1

0

3

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1607.1

To Summarize concept, different types of disasters and their effects on environment. (BTL5)

1607.2

To understand the types of Environmental hazards & Disasters. (BTL2)

1607.3

To Describe the causes of disasters and their control measures. (BTL1)

1607.4

To Apply disaster management techniques through engineering applications. (BTL3)


1607.5


To apply the new Emerging approaches in Disaster Management. (BTL3)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1607.1	1	1	2	-	1	2	3	1	-	-	2	2	-	-
1607.2	-	1	3	-	-	1	2	1	-	1	1	1	-	2
1607.3	1	2	1	1	-	-	1	-	-	-	1	1	-	1
1607.4	-	2	1	-	-	1	3	-	1	2	2	2	1	1
1607.5	2	2	2	-	1	-	1	-	2	-	1	1	2	-
AVG	1	2	2	1	1	1	2	1	2	2	1	1	2	1

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

 <p>RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE Engineering Excellence Through Innovation</p>	RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE														
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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-II				Reg: R15				AY:						
Course Code:	Course Name: Concrete Technology Laboratory											L	T	P	C
15A01609	Prerequisite: None											0	0	4	2
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1609.1	Check the quality of cement (BTL4)														
1609.2	Check the characteristics of fine and coarse aggregates(BTL4)														
1609.3	Interpret the behaviour and characteristics of the fresh and hardened concrete (BTL2)														
1609.4	Implement the conceptual knowledge on fresh concrete workability properties to judge the suitability of concrete (BTL3)														
1609.5	Check the strength of hardened concrete through destructive and non-destructive tests. (BTL4)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1609.1	2	2	1	-	-	2	2	1	-	-	-	1	3	1	
1609.2	3	1	2	1	-	2	1	-	-	-	1	1	2	2	
1609.3	2	2	3	-	-	2	1	1	-	-	-	1	2	1	
1609.4	2	3	3	1	-	2	-	1	-	-	1	1	2	1	
1609.5	3	2	2	1	-	2	1	-	-	-	1	1	3	1	
AVG	3	2	2	1	-	2	1	1	-	-	1	1	2	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: III-II				Reg: R15				AY:						
Course Code:	Course Name: Advanced English Language Communication Skills (AELCS) Laboratory											L	T	P	C
15A52602	Prerequisite: None											0	0	2	
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
2602.1	Remember and understand the different aspects of the English language proficiency with emphasis on LSRW skills[BTL1]														
2602.2	Apply communication skills through various language learning activities[BTL2]														
2602.3	Analyze the English speech sounds, stress, rhythm, intonation and syllable division for better listening and speaking comprehension. [BTL4]														
2602.4	Evaluate and exhibit acceptable etiquette essential in social and professional settings.[BTL6]														
2602.5	Create awareness on mother tongue influence and neutralize it in order to improve fluency in spoken English.[BTL6]														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
2602.1	-	-	-	-	-	-	-	-	1	1	-	2	-	1	
2602.2	-	-	-	-	-	1	2	-	-	1	-	-	1	1	
2602.3	-	-	-	-	-	-	-	-	-	1	-	-	1	1	
2602.4	-	-	-	-	-	-	1	1	1	-	-	-	1	1	
2602.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AVG	-	-	-	-	-	1	2	1	1	1	-	2	1	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: III-II

Reg: R15

AY:

Course Code:

**Course Name: Transportation Engineering
Laboratory**

L

T

P

C

15A01610

Prerequisite: None

0

0

4

2

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1610.1

To Identify Engineering Properties of Aggregates and the Grade & Properties of Bitumen (BTL4)

1610.2

To Predict out the Peak Hour Traffic & Peak Time for a given location on the road (BTL3)

1610.3

To Calculate Design Speed, Maximum Speed & Minimum Speed limits of a location through spot speed (BTL3)

1610.4

To Measure the Quality Control tests on Pavements and Pavement Materials Evaluate (BTL3)

1610.5

To Examine various Specific Tests required for Field Application and draw necessary inferences (BTL4)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1610.1	3	2	1	3	2	1		1	1			3	3	2
1610.2	3	2	1	3	2	1		1	1			2	3	2
1610.3	3	2	1	3	2	1			1			2	3	2
1610.4	3	2	1	3	2	1		1	1			2	2	2
1610.5	3	2	1	3	2	1		1	1			2	2	2
AVG	3	2	1	3	2	1	-	1	1	-	-	2	3	2

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: IV-I

Reg: R15

AY:

Course Code:

Course Name: Finite Element Methods

L

T

P

C

15A01701

Prerequisite: None

3

1

0

3

COURSE OUTCOMES (COs)

CO No.	COURSE OUTCOME
1701.1	Demonstrate the differential equilibrium equations and their relationship. (BTL2)
1701.2	Analyze plane stress and plane strain problems Outcomes. (BTL5)
1701.3	Demonstrate the displacement models and load vectors. (BTL2)
1701.4	Compute the stiffness matrix for isoperimetric element. (BTL4)
1701.5	Apply numerical methods to FEM. (BTL3)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1701.1	3	3	1	1	-	-	1	1	-	-	1	1	3	1
1701.2	2	3	2	1	-	-	1	1	-	-	1	2	3	1
1701.3	3	3	2	1	-	-	1	-	-	-	1	2	3	2
1701.4	3	3	2	1	-	-	1	1	-	-	1	2	3	1
1701.5	3	3	2	1	-	-	1	1	-	-	1	2	3	1
AVG	3	3	2	1	-	-	1	1	-	-	1	2	3	1

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: IV-I

Reg: R15

AY:

Course Code:

Course Name: Transportation Engineering-II

L

T

P

C

15A01702

Prerequisite: Transportation Engineering

3

1

0

3

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1702.1

To Interpret the importance of railway infrastructure planning and design. (BTL2)

1702.2

To Identify the factors governing design of railway infrastructures and to Design and analyze the railway track system. (BTL2)

1702.3

Understanding about airport engineering. (BTL2)

1702.4

Analyzing the different aspects of the airport design. (BTL5)

1702.5

To Analyze about the description of harbours& ports. (BTL5)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1702.1	3	2	3	1	1	1	-	1	-	1	-	2	3	1
1702.2	3	1	3	1	1	1	-	2	-	1	-	2	3	1
1702.3	3	2	3	1	1	1	-	2	-	1	-	2	3	1
1702.4	3	2	2	-	1	1	-	2	-	1	-	2	3	1
1702.5	3	2	3	1	1	1	-	2	-	1	-	2	3	1
AVG	3	2	3	1	1	1	-	2	-	1	-	2	3	1

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: IV-I

Reg: R15

AY:

Course Code:

Course Name: ENVIRONMENTAL ENGINEERING

L

T

P

C

15A01703

Prerequisite: None

2

1

0

3

L: Lecture T: Tutorial P: Practical C: Credits

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1703.1

To Identify the source of water and water demand.(BTL3)

1703.2

To Apply the water treatment concept and also to understand the various water distribution methods. (BTL3)

1703.3

To Prepare basic process designs of water and wastewater treatment plants collect, reduce, analyze, and evaluate basic water quality data. (BTL4)

1703.4

To Determine the sewage characteristics and design various sewage treatment plants. (BTL5)


1703.5

To Understand the concept of solid waste management and identify the impacts of air pollution and noise pollution on environment. (BTL2)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1703.1	2	2	1	-	-	2	3	-	-	-	2	1	3	2
1703.2	3	1	2	-	-	2	3	1	-	-	-	1	3	1
1703.3	2	3	3	-	-	2	3	1	-	-	-	1	3	2
1703.4	2	3	3	1	-	2	3	1	-	-	-	1	3	2
1703.5	3	2	2	-	-	2	3	-	-	-	2	1	3	1
AVG	2	2	2	1	-	2	3	1	-	-	2	1	3	2

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

 <p>RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE Engineering Excellence Through Innovation</p>	RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE														
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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-I				Reg: R15				AY:						
Course Code:		Course Name: WATER RESOURCES ENGINEERING – II										L	T	P	C
15A01704		Prerequisite: None										3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1704.1	To Understand various hydraulic structures such as diversion head work, canal falls and structures involved in cross drainage works. (BTL2)														
1704.2	To Design head and cross regulator structures for river training work. (BTL6)														
1704.3	To understand about flood routing concepts & Design of different types of dams. (BTL2)														
1704.4	To Design and analyze the stability of Earth and Gravity dams. (BTL6)														
1704.5	To understand the concept of spillways and Development of hydro power in India. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1704.1	3	-	3	1	1	3	1	3	1	1	-	-	3	2	
1704.2	3	2	3	1	1	3	2	3	1	1	1	1	3	3	
1704.3	3	2	2	1	1	3	2	3	1	1	1	1	3	3	
1704.4	3	2	2	1	1	3	2	3	1	1	1	1	3	3	
1704.5	3	2	2	1	1	3	2	3	1	1	1	1	3	3	
AVG	3	2	2	1	1	3	2	3	1	1	1	1	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: IV-I

Reg: R15

AY:

Course Code:

Course Name: Ground Improvement Techniques

L

T

P

C

15A01706

Prerequisite: None

3

1

0

3


COURSE OUTCOMES (COs)

CO No.	COURSE OUTCOME
1706.1	Applying grouting and Dewatering techniques. (BTL3)
1706.2	Understanding in-situ Densification methods on granular and cohesive soils.(BTL2)
1706.3	Understanding different methods of stabilization of soil. (BTL2)
1706.4	Understanding the principles of reinforced earth and Utilization of Geosynthetics for ground improvement. (BTL2)
1706.5	Identifying the problems in expansive soils.(BTL3)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1706.1	1	1	2	-	1	2	3	1	-	-	2	2	-	-
1706.2	-	1	3	-	-	1	2	1	-	1	1	1	-	2
1706.3	1	2	1	1	-	-	1	-	-	-	1	1	-	1
1706.4	-	2	1	-	-	1	3	-	1	2	2	2	1	1
1706.5	2	2	2	-	1	-	1	-	2	-	1	1	2	-
AVG	1	2	2	1	1	1	2	1	2	2	1	1	2	1

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-I				Reg: R15				AY:						
Course Code:	Course Name: Rehabilitation And Retrofitting Of Structures											L	T	P	C
15A01710	Prerequisite: None											3	1	0	3
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1710.1	To Identify and define all the terms and concepts associated with deterioration and distress in concrete structures. (BTL3)														
1710.2	To Identify the suitable material and techniques for fire damage and corrosion of reinforcement. (BTL3)														
1710.3	To Evaluate the damage in distressed structures through Inspection and Testing. (BTL5)														
1710.4	To Understand different strengthening methods for structural retrofitting and jacketing. (BTL2)														
1710.5	To Understand various types of sensors and building instrumentation. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1710.1	1	2	2	1	-	1	1	-	-	-	1	1	3	3	
1710.2	1	1	2	-	-	1	2	-	-	-	-	-	3	2	
1710.3	2	1	2	1	-	1	-	-	1	1	-	-	3	3	
1710.4	1	2	3	-	-	2	1	-	-	-	-	1	3	3	
1710.5	1	1	1	-	1	1	-	-	-	-	1	1	3	2	
AVG	1	1	2	1	1	1	1	-	1	1	1	1	3	3	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: IV-I

Reg: R15

AY:

Course Code:

Course Name: CAD LAB

L

T

P

C

15A01711

Prerequisite: None

0

0

4

2


COURSE OUTCOMES (COs)

CO No.	COURSE OUTCOME
1711.1	Understand the Basic modeling in STAAD pro.(BTL2)
1711.2	Design of the structural elements using different design codes. (BTL6)
1711.3	Analyse the various elements like beam, column, truss, frame.(BTL4)
1711.4	Interpretation the data from STAAD.(BTL2)
1711.5	Derive the Analysis and design Retaining walls. (BTL6)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1711.1	2	2	3	1	3	1	-	1	-	-	2	3	3	3
1711.2	2	3	3	2	2	-	-	-	2	-	2	1	3	2
1711.3	3	3	3	1	1	-	-	-	-	-	2	2	2	2
1711.4	1	2	3	2	2	-	-	-	1	-	2	3	3	3
1711.5	1	3	3	2	3	1	-	-	2	2	3	3	3	3
AVG	2	3	3	2	2	1	-	1	1	2	2	2	3	3

3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-I				Reg: R15				AY:						
Course Code:	Course Name: ENVIRONMENTAL ENGINEERING LAB											L	T	P	C
15A01712	Prerequisite: None											0	0	4	2
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1712.1	To Estimate various parameters like PH, Chlorides, Sulphates, Nitrates in water. (BTL5)														
1712.2	To Demonstrate the laboratory experiments on various parameters of water and waste water. (BTL2)														
1712.3	To Analyse the technical laboratory report on quality assessment of potable and waste water. (BTL4)														
1712.4	To Estimate of industrial effluents of samples in the laboratory. (BTL6)														
1712.5	To Apply the laboratory results in the basic environmental design and in the field of Engineering. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1712.1	2	2	3	2	1	-	3	1	-	-	-	1	3	1	
1712.2	2	1	2	2	1	-	3	1	-	-	-	1	3	2	
1712.3	2	2	3	2	1	-	3	1	-	-	-	1	2	1	
1712.4	2	3	3	2	1	-	3	1	-	-	-	1	2	1	
1712.5	3	2	2	2	1	-	3	1	-	-	-	1	3	1	
AVG	2	2	2	2	1	-	3	1	-	-	-	1	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															



RAMIREDDY SUBBARAMI REDDY
ENGINEERING COLLEGE
Engineering Excellence
Through Innovation

RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

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DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

SEM: IV-II

Reg: R15

AY:

Course Code:

Course Name: Advanced Structural Engineering

L

T

P

C

15A01802

Prerequisite: None

2

1

0

3

COURSE OUTCOMES (COs)

CO No.

COURSE OUTCOME

1802.1

Design of roof systems with reference to Indian standards. (BTL6)

1802.2

Design of silos. (BTL6)

1802.3

Design of chimneys. (BTL6)

1802.4

Design of water retaining structures. (BTL6)


1802.5


Design of retaining walls. (BTL6)


Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)


COs	PO												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1802.1	3	3	3	2	1	-	1	-	2	1	-	2	3	1
1802.2	3	3	3	3	1	-	-	-	1	-	-	1	3	1
1802.3	3	3	3	3	-	-	1	-	2	-	-	2	3	2
1802.4	3	3	3	2	-	-	-	-	2	1	2	2	3	1
1802.5	3	3	3	3	-	-	-	-	2	-	1	2	3	1
AVG	3	3	3	3	1	0	1	0	2	1	2	2	3	1


3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-II				Reg: R15				AY:						
Course Code:	Course Name: Environmental Impact Assessment & Management											L	T	P	C
15A01804	Prerequisite: None											3	1	0	3
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1804.1	To understand the Concepts of different types of environmental examinations. (BTL2)														
1804.2	To understand different type of methodologies for impact assessment on environment. (BTL2)														
1804.3	Understanding the impact assessment on wildlife and land use. (BTL2)														
1804.4	Understanding the impact assessment on vegetation.(BTL2)														
1804.5	To understand the different type of acts on environment. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1804.1	3	2	2	1	2	1	-	1	-	1	1	2	3	1	
1804.2	3	2	2	1	2	1	-	2	-	1	1	2	3	1	
1804.3	3	2	1	1	3	1	-	2	-	1	1	2	3	1	
1804.4	3	2	2	-	3	1	-	2	-	1	1	2	3	1	
1804.5	3	2	1	1	3	1	-	2	-	1	3	2	3	1	
AVG	3	2	2	1	3	1	-	2	-	1	1	2	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-II				Reg: R15				AY:						
Course Code:		Course Name: Comprehensive Viva Voce										L	T	P	C
15A01805		Prerequisite: None										0	0	4	2
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1805.1	To Prepare Oral Presentation skills by answering questions in precise and concise manner. (BTL3)														
1805.2	To Develop confidence and inter-personal skills. (BTL6)														
1805.3	To Explain the answer very clearly for all the courses (BTL2)														
1805.4	To Discuss the clear explanation about the course structure. (BTL3)														
1805.5	To Examine the Personal development skills so that to enhance knowledge. (BTL5)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1805.1	3	1	1	-	1	2	1	2	1	2	-	1	3	1	
1805.2	3	2	1	1	1	2	1	2	1	2	1	1	3	1	
1805.3	3	2	1	1	1	2	1	2	1	2	2	1	3	1	
1805.4	3	1	1	1	1	2	1	2	1	2	1	1	3	1	
1805.5	3	2	1	1	1	1	1	2	1	2	-	1	3	1	
AVG	3	2	1	1	1	2	1	2	1	2	1	1	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-II				Reg: R15				AY:						
Course Code:	Course Name: Technical Seminar											L	T	P	C
15A01806	Prerequisite: None											0	0	4	2
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1806.1	To Develop comprehensive report based on literature survey/Topics related to different subjects in the semester. (BTL6)														
1806.2	To Identify the applicability of modern software tools and technology. (BTL3)														
1806.3	To present the Answer for queries which is posed by the listeners. (BTL3)														
1806.4	To Asses himself for to improve presentation skills. (BTL5)														
1806.5	To Evaluate the skills which is required for the topic. (BTL5)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1806.1	3	2	2	3	2	2	1	2	3	2	-	1	3	1	
1806.2	3	2	2	3	3	2	1	2	3	2	1	1	3	1	
1806.3	3	2	2	3	2	2	1	2	3	2	2	1	3	1	
1806.4	3	2	2	2	2	2	1	2	3	2	1	1	3	1	
1806.5	3	2	2	3	2	1	1	2	3	2	-	1	3	1	
AVG	3	2	2	3	2	2	1	2	3	2	1	1	3	1	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-II				Reg: R15				AY:						
Course Code:	Course Name: Project Work											L	T	P	C
15A01807	Prerequisite: None											2	1	0	3
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1807.1	To Prepare abstract for given project by identifying the requirements and prospective solution. (BTL3)														
1807.2	To Develop latest information related to the project from various sources to analyse the project. (BTL6)														
1807.3	To Choose the materials for the project as per specifications and efficient test for developing the project. (BTL5)														
1807.4	To Illustrate effective team work after efficient testing, elaborate the completed task and compile the project. (BTL2)														
1807.5	To Prepare a good report of the project as per the guidelines and present to the panel of experts. (BTL3)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1807.1	3	2	2	3	2	2	1	2	3	2	-	3	3	2	
1807.2	3	2	2	3	3	2	1	2	3	2	1	3	3	2	
1807.3	3	2	2	3	2	2	1	2	3	2	2	3	3	2	
1807.4	3	2	2	2	2	2	1	2	3	2	1	3	3	2	
1807.5	3	2	2	3	2	1	1	2	3	2	-	3	3	2	
AVG	3	2	2	3	2	2	1	2	3	2	1	3	3	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															

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	DEPARTMENT OF CIVIL ENGINEERING														
	COURSE OUTCOMES & MAPPING OF COs with POs & PSOs														
	SEM: IV-II				Reg: R15				AY:						
Course Code:	Course Name: Survey Camp											L	T	P	C
15A01808	Prerequisite: None											0	0	0	2
L: Lecture T: Tutorial P: Practical C: Credits															
COURSE OUTCOMES (COs)															
CO No.	COURSE OUTCOME														
1808.1	To Identify various conventional instruments involved in surveying with respect to utility and precision. (BTL2)														
1808.2	To Explain the Use and operation of Theodolite in the field. (BTL2)														
1808.3	To Apply the knowledge of Theodolite in different operations in civil engineering projects. (BTL3)														
1808.4	To Apply the knowledge and principles for the purpose of Tachometric survey in finding out the constants. (BTL3)														
1808.5	To Outline accurate measurements, field plotting and adjustment of traverse. (BTL2)														
Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)															
COs	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
1808.1	3	1	1	2	1	2	-	2	1	-	-	1	3	3	
1808.2	3	2	1	1	1	2	-	2	1	1	-	1	3	2	
1808.3	3	2	1	2	1	2	1	2	1	1	-	1	3	3	
1808.4	3	1	1	2	2	2	1	2	1	1	-	1	3	2	
1808.5	3	2	1	1	2	1	1	2	1	1	-	1	3	2	
AVG	3	2	1	2	1	2	1	2	1	1	0	1	3	2	
3/2/1 Indicates Strength of Correlation. 3-High, 3-Medium and 1-Low															