



SRI BHARATHI

ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)
Kaikkurichi, Pudukkottai -622 303

www.sbec.edu.in

NAAC DOCUMENTS



Quality Indicator Frame Work

Criterion – 2

Teaching-Learning and Evaluation

Submitted by

IQAC

Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women



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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Criteria 2	Teaching-Learning and Evaluation	350
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Key Indicator-2.6 Student Performances and Learning Outcome (90)

2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all programmes offered by the institution are stated and displayed on website

DEPARTMENT OF CIVIL ENGINEERING
R2013



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013 – CO PO MAPPING

I SEMESTER

Dr. S.THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

**SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN**

Kaikkurichi - 622 303, Pudukkottai Dt.



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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

HS6151-Technical English-I

Course Code	Course Name	Course Outcome (CO) Students will be able to
HS6151	Technical English-I	C101.1: Apply the collaborative and social aspects of research and writing processes.
		C101.2: Comprehend that research and writing is a series of tasks, including accessing, retrieving, evaluating, analyzing and synthesizing appropriate data and information from sources that vary in content, format, structure and scope.
		C101.3: Use appropriate technologies to organize, present and communicate information to address a range of audiences, purposes and genres.
		C101.4: Design the multidisciplinary settings to manage projects as an individual, as a member or leader after taking the exercises like role-play, group discussion and making presentations.
		C101.5: Model the life-long learning methods suitable for all the environments committed to professional ethics and responsibilities after inculcating the habit of reading and writing.
		C101.6: Analyze and identify the root for effective managerial skills through different spoken discourse and excerpts.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
HS6151																
C101.1	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-	
C101.2	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-	
C101.3	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-	
C101.4	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-	
C101.5	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-	
C101.6	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-	
C101	2	2	1	1	-	-	1	-	-	1	-	1	1	-	-	

*3-High correlation; *2-Medium correlation; *1-Low correlation

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REGULATION 2013- PO CO MAPPING

MA6151-Mathematics-I

Course Code	Course Name	Course Outcome (CO) Students will be able to
MA6151	Mathematics-I	C102.1: Describe a clear idea of matrix algebra pertaining eigen values and eigen vectors in addition dealing with quadratic forms.
		C102.2: Learn infinite series and their convergence and acquire the knowledge of with limitations.
		C102.3: Use infinite series approximations for solutions arising in mathematical modeling.
		C102.4: Explain and characterize phenomena which evolve around circle of curvature and envelope.
		C102.5: Extend the function of a one variable to several variables. Multivariable functions of real variables arise inevitable in engineering.
		C102.6: Expose to double and triple integration so that they can handle integrals of higher order which are applied in engineering field.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C102.1	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.3	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.4	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.5	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102.6	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C102	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-

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REGULATION 2013- PO CO MAPPING

PH6151-Engineering Physics-I

Course Code	Course Name	Course Outcome (CO) Students will be able to
PH6151	Engineering Physics-I	C103.2 Classify the Bravais lattices and different types of crystal structures and growth technique.
		C103.2: Demonstrate the properties of elasticity and heat transfer through objects.
		C103.3: Explain black body radiation, properties of matter waves and Schrodinger wave equations.
		C103.4: Describe and analyzing the quantum nature of radiation and matter to solve the real time societal and technological problems.
		C103.5: Illustrate the acoustic requirements, production and application of ultrasonics.
		C103.6: Examine the characteristics of laser and optical

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C103.1	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.2	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.3	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.4	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.5	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103.6	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C103	2	2	1	1	-	-	-	-	-	-	-	-	1	-	-

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REGULATION 2013- PO CO MAPPING

CY6151-Engineering Chemistry-I

Course Code	Course Name	Course Outcome (CO) Students will be able to
CY6151	Engineering Chemistry-I	C104.1: Classify the polymers, different polymerization techniques and its uses.
		C104.2: Describe the laws of thermodynamics, various thermodynamics functions and their significance.
		C104.3: Explain the photo physical processes and the components of analytical instruments.
		C104.4: Illustrate the phase diagrams, alloys and heat treatment processes
		C104.5: Discuss the synthesis, characteristics and the applications of nano materials.
		C104.6: Create the knowledge of nonmaterial's and their applications in fields like medicinal, electrical, electronic, chemical, etc.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C104.1	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.2	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.3	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.4	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.5	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104.6	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-
C104	3	2	1	1	-	-	1	-	-	-	-	1	1	-	-

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REGULATION 2013- PO CO MAPPING

GE6151-Computer Programming

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6151	Computer Programming	C105.1: Explain the basic organization of computers, the number systems and write the pseudo code for algorithms and flow chart.
		C105.2: Develop 'C' programming fundamentals, looping statements and solve problems.
		C105.3: Design 'C' programs for arrays and strings.
		C105.4: Use functions with pass by value and reference, pointers in programs.
		C105.5: Develop coding in 'C' for structures and unions with storage classes and pre-processor.
		C105.6: Design and execute C programs for simple applications.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C105.1	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.2	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.3	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.4	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.5	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105.6	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-
C105	3	2	1	1	1	-	-	-	-	-	-	1	1	-	-

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DEPARTMENT OF CIVIL ENGINEERING REGULATION 2013- PO CO MAPPING

GE6152-Engineering Graphics

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6152	Engineering Graphics	C106.1: Construct the conic sections and special curves and outline their practical applications and sketch the orthographic views from pictorial views and models.
		C106.2: Apply the principles of orthographic projections of points in all quadrants, lines and planes in first quadrant.
		C106.3: Draw the projections of simple solids like prisms, pyramids, cylinder and cone and obtain the traces of plane figures.
		C106.4: Design the sectional views of solids like cube, prisms, pyramids, cylinders & cones and Development of its lateral surfaces.
		C106.5: Apply the principles of isometric projection and perspective projection of simple solids and truncated prisms, pyramids, cone and cylinders.
		C106.6: Build an engineering component using Paper drawing as well as in CAD.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C106.1	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.2	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.3	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.4	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.5	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106.6	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-
C106	3	2	1	1	-	1	-	-	-	1	-	-	1	-	-

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

GE6161-Computer Practices Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6161	Computer Practices Laboratory	C107.1: Prepare data using MS-word & Excel to visualize graphs, charts in MS-Excel.
		C107.2: Outline the given problem using flowchart and to program using Switch case & Control structures.
		C107.3: Develop the code using decision making & looping statements.
		C107.4: Apply passing parameters using Arrays & Functions.
		C107.5: Use structure and Union for a given database and to bring out the importance of Unions over structure.
		C107.6: Design and implement C programs for simple applications.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C107.1	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.2	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.3	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.4	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.5	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107.6	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-
C107	2	2	1	1	-	-	-	-	1	-	-	1	1	-	-

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REGULATION 2013- PO CO MAPPING

GE6162-Engineering Practices Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6162	Engineering Practices Laboratory	C108.1: Demonstrate wiring for a simple residential house, identify the ratings of various appliances like Fluorescent tube, incandescent lamp, etc.
		C108.2: Calculate the different Electrical quantities, measure the energy consumption using single phase energy meter.
		C108.3: Measure the resistance to earth of an electrical equipment, analyze AC signal parameters using CRO.
		C108.4: Verify the Truth tables of Logic gates AND, OR, EOR and NOT, generate clock signal using suitable gates.
		C108.5: Develop soldering in a PCB, measure ripple factor of Half Wave Rectifier and Full Wave Rectifier.
		C108.6: Provide exposure to the students with hands-on experience on various basic engineering practices in Civil and Mechanical Engineering.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C108.1	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.2	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.3	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.4	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.5	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108.6	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-
C108	2	1	1	1	1	-	-	-	1	-	-	1	2	1	-

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REGULATION 2013- PO CO MAPPING

GE6163-Physics And Chemistry Laboratory-I

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6163	Physics And Chemistry Laboratory-I	C109.1: Apply the physics principles of Thermal physics and Properties of Matter to evaluate properties of materials.
		C109.2: Evaluate the wavelength of spectral lines using spectrometer, the wavelength of laser, particle size, acceptance angle of an optical fiber using semiconductor diode laser and the thickness of a thin wire through interference fringes using Air wedge apparatus.
		C109.3: Appraise the velocity of sound and compressibility of the liquid using ultrasonic interferometer and thermal conductivity for bad conductors using Lee's disc apparatus.
		C109.4: Determine the DO content in water sample by winkler's method and molecular weight of polymer by Ostwald viscometer.
		C109.5: Find the strength of an acid using pH meter and conductometer.
		C109.6: Estimate the amount of weak and strong acids in a mixture by conductometer.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C109.1	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.3	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.4	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.5	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109.6	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C109	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-

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REGULATION 2013 – CO PO MAPPING

II SEMESTER

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REGULATION 2013- PO CO MAPPING

HS6251-Technical English-II

Course Code	Course Name	Course Outcome (CO) Students will be able to
HS6251	Technical English-II	C110.1: Speak clearly, confidently, comprehensibly, and communicate with one or many listeners using appropriate communicative strategies.
		C110.2: Define the impact of the professional engineering solution in societal and environmental contexts with the help of the basic grammar taught to communicate effectively and confidently.
		C110.3: Write cohesively and coherently and flawlessly avoiding grammatical errors, using a wide vocabulary range, organizing their ideas logically on a topic.
		C110.4: Read different genres of texts adopting various reading strategies.
		C110.5: Listen/view and comprehend different spoken discourses/excerpts in different accents.
		C110.6: Recognize, understand, and analyze the context within which language, information, and knowledge are produced, managed, organized, and disseminated.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
HS6251																
C110.1	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-	
C110.2	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-	
C110.3	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-	
C110.4	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-	
C110.5	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-	
C110.6	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-	
C110	2	2	1	1	-	-	1	-	1	1	-	1	1	-	-	

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REGULATION 2013- PO CO MAPPING

MA6251-Mathematics-II

Course Code	Course Name	Course Outcome (CO) Students will be able to
MA6251	Mathematics-II	C111.1: Solve ordinary differential equations that model most of the engineering problems.
		C111.2: Acquaint the concepts of vector calculus-like Gradient, Divergence, Curl, Directional derivative, Irrotational vector and Solenoidal vector.
		C111.3: Make to appreciate the purpose of using transforms to create new domain in which it is easier to handle the problem that is being investigated.
		C111.4: Develop an Explaining of the standard techniques of complex variable and mapping so as to enable the student to apply them with confidence, in application areas such as heat conduction, elasticity, fluid dynamics and flow of electric current.
		C111.5: Expose to the concept of Cauchy's integral theorem, Taylor, Laurent expansions and Singular points.
		C111.6: Use Application of residue theorem to evaluate complex integrals.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3	
MA6251																
C111.1	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-	
C111.2	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-	
C111.3	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-	
C111.4	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-	
C111.5	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-	
C111.6	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-	
C111	2	2	2	1	-	-	-	-	1	-	-	1	1	-	-	

*3-High correlation; *2-Medium correlation; *1-Low correlation


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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

PH6251- Engineering Physics - II

Course Code	Course Name	Course Outcome (CO) Students will be able to
PH6251	Engineering Physics - II	C112.1: Illustrate classical and quantum free electron theory and calculate carrier concentration in metals.
		C112.2: Describe the carrier concentration in semi conductors and identify the p-type and n-type semi conductor using hall effect.
		C112.3: Illustrate the special material properties such as magnetism.
		C112.4: Discuss the super conductivity.
		C112.5: Explain the dielectrics, types of polarization, losses and breakdown
		C112.6: Discuss the properties, preparation and applications of metallic alloys, SMA, nano materials, NLO, Bio-materials.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C112.1	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.2	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.3	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.4	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.5	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112.6	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-
C112	2	2	1	1	-	1	1	-	-	-	-	-	1	-	-

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CY6251-Engineering Chemistry-II

Course Code	Course Name	Course Outcome (CO) Students will be able to
CY6251	Engineering Chemistry-II	C113.1: Explain the problems of using hard water in boilers and the methods of treatment of water for boiler use.
		C113.2: Design the electrochemical cells and to identify the types of corrosion and the methods of preventing.
		C113.3: Illustrate the methods of harnessing energy from non-conventional energy sources.
		C113.4: Classify various engineering materials and their importance.
		C113.5: Relate the significance of solid, liquid and gaseous fuels and to calculate the calorific values of fuels and the requirement of air for combustion in furnaces.
		C113.6: Analyze issues related to fuels and their synthesis and able to understand working of IC and diesel engines.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C113.1	2	2	1	1	-	-	-	-	-	1	-	1	1	-	-
C113.2	2	2	1	1	-	-	-	-	-	1	-	1	1	-	-
C113.3	2	2	1	1	-	-	-	-	-	1	-	1	1	-	-
C113.4	2	2	1	1	-	-	-	-	-	1	-	1	1	-	-
C113.5	2	2	1	1	-	-	-	-	-	1	-	1	1	-	-
C113.6	2	2	1	1	-	-	-	-	-	1	-	1	1	-	-
C113	2	2	1	1	-	-	-	-	-	1	-	1	1	-	-

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

GE6252- Basic Electrical and Electronics Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6252	Basic Electrical And Electronics Engineering	C114.1: Compute the electric circuit parameters for simple problems.
		C114.2: Summarize the concepts of domestic wiring and protective devices.
		C114.3: Discuss the working principle and applications of electrical machines.
		C114.4: Analyze the characteristics of analog electronic devices.
		C114.5: Explain the types and operating principles of sensors.
		C114.6: Describe the types and operating principles of transducers.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	
GE6252																
C114.1	2	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-
C114.2	2	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-
C114.3	2	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-
C114.4	2	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-
C114.5	2	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-
C114.6	2	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-
C114	2	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

GE6253 -Engineering Mechanics

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6253	Engineering Mechanics	C115.1: Explain the differential principles applies to solve engineering problems dealing with force.
		C115.2: Describe equilibrium of rigid bodies in two dimensions & equilibrium of rigid bodies in three dimensions.
		C115.3: Demonstrate T-section, I-section, angle section, hollow section by using standard formula.
		C115.4: Explain the differential principles applies to solve engineering problems dealing with velocity and acceleration.
		C115.5: Illustrate equilibrium analysis of simple system with sliding friction & wedge friction.
		C115.6: Describe the rolling resistance, translation and rotation of rigid bodies.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
GE6253															
C115.1	3	2	2	2	-	-	1	-	2	1	1	1	2	2	-
C115.2	3	2	2	2	-	-	1	-	2	1	1	1	2	2	-
C115.3	3	2	2	2	-	-	1	-	2	1	1	1	2	2	-
C115.4	3	2	2	2	-	-	1	-	2	1	1	1	2	2	-
C115.5	3	2	2	2	-	-	1	-	2	1	1	1	2	2	-
C115.6	3	2	2	2	-	-	1	-	2	1	1	1	2	2	-
C115	3	2	2	2	-	-	1	-	2	1	1	1	2	2	-

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

GE6261- Computer Aided Drafting and Modeling Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6261	Computer Aided Drafting and Modeling Laboratory	C116.1: Explain the study of capability of software for drafting and modeling, draw a title block with necessary text and projection symbol.
		C116.2: Demonstrate drawing of curve, front view and top view of simple solids.
		C116.3: Explain drawing of plan of a residential building
		C116.4: Illustrate drawing of a simple steel truss, sectional view of prism, pyramid, cylinder, cone etc.,
		C116.5: Describe the isometric projection of simple objects.
		C116.6: Explain creation of 3-D models of simple objects and obtaining 2-D multi view drawings from 3-D model.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
GE6261															
C116.1	3	2	2	1	1	1	-	-	1	1	-	1	1	-	1
C116.2	3	2	2	1	1	1	-	-	1	1	-	1	1	-	1
C116.3	3	2	2	1	1	1	-	-	1	1	-	1	1	-	1
C116.4	3	2	2	1	1	1	-	-	1	1	-	1	1	-	1
C116.5	3	2	2	1	1	1	-	-	1	1	-	1	1	-	1
C116.6	3	2	2	1	1	1	-	-	1	1	-	1	1	-	1
C116	3	2	2	1	1	1	-	-	1	1	-	1	1	-	1

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REGULATION 2013- PO CO MAPPING

GE6262- Physics and Chemistry Laboratory-II

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6262	Physics and Chemistry Laboratory-II	C117.1: Appraise the Young's modulus of the beam by uniform and non uniform bending method, the moment of inertia and Rigidity Modulus for thin wire using Torsion Pendulum.
		C117.2: Use Poiseuille's method for determining the coefficient of viscosity of the liquid
		C117.3: Estimate the refractive index of spectral lines for determining the dispersive power of a prism circuit.
		C117.4: Determine the type, amount of alkalinity, hardness in a given water sample.
		C117.5: Evaluate the amount of copper using EDTA method.
		C117.6: Examine the potentiometric redox titration and Conductometric precipitation titration.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C117.1	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C117.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C117.3	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C117.4	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C117.5	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C117.6	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-
C117	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-

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III SEMESTER

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REGULATION 2013- PO CO MAPPING

MA6351-Transforms and Partial Differential Equation

Course Code	Course Name	Course Outcome (CO) Students will be able to
MA6351	Transform And Partial Differential Equation	C201.1: Solve Linear Partial differential equations of first and second order
		C201.2: Associate the concepts of Fourier series expansion for even and odd K3 K2 function
		C201.3: Apply the concepts of Fourier series in solving boundary value problems
		C201.4: Learn the mathematical principles on transforms and partial differential equations would provide them the ability to formulate and solve some of the physical problems of engineering
		C201.5: Discuss the Fourier transform, Fourier Sine and Cosine transform techniques
		C201.6: Discuss the concepts of Z-Transform techniques for discrete time K2 systems

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
MA 6351																
C201.1	3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C201.2	3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C201.3	3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C201.4	3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C201.5	3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C201.6	3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-
C201	3	2	1	1	-	-	-	-	-	-	-	-	-	1	-	-

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REGULATION 2013- PO CO MAPPING

GE6351- Environmental Science And Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6351	Environmental Science And Engineering	C202.1: Explain about the environment, eco systems and bio diversity.
		C202.2: Describe environmental pollution like air pollution, water pollution, soil pollution, noise pollution, thermal pollution etc.,
		C202.3: Illustrate the basics natural resources like forest resources, water resources, mineral resources, land resources etc.,
		C202.4: Describe about the social issues and the environment
		C202.5: Demonstrate the bio medical waste rules and machinery involved in environmental legislation.
		C202.6: Describe the human population & environment.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
GE6351															
C202.1	3	3	2	2	-	2	2	1	1	1	-	-	2	2	1
C202.2	3	3	2	2	-	2	2	1	1	1	-	-	2	2	1
C202.3	3	3	2	2	-	2	2	1	1	1	-	-	2	2	1
C202.4	3	3	2	2	-	2	2	1	1	1	-	-	2	-	1
C202.5	3	3	2	2	-	2	2	1	1	1	-	-	2	2	1
C202.6	3	3	2	2	-	2	2	1	1	1	-	-	2	-	1
C202	3	3	2	2	-	2	2	1	1	1	-	-	1	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6301- Engineering Geology

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6301	Engineering Geology	C203.1: Describe the importance of geological knowledge such as earthquake & seismic zones in india.
		C203.2: Demonstrate the physical properties of minerals such as quartz, feldspar, pyroxene etc.,
		C203.3: Explain the classification, description, occurrence, engineering properties, distribution and uses of rocks,
		C203.4: Explain the types of foundations and other related aspects.
		C203.5: Describe about the structural geology and geophysical methods.
		C203.6: Illustrate the remote sensing for civil engineering applications.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6301															
C203.1	2	1	1	1	-	-	-	-	2	1	-	-	-	-	1
C203.2	2	1	1	1	-	1	-	-	2	1	-	-	1	1	1
C203.3	2	1	1	1	-	1	-	-	2	1	-	-	1	1	1
C203.4	2	1	1	1	-	1	-	-	2	1	-	-	1	1	1
C203.5	2	1	1	1	-	-	-	-	2	1	-	-	1	1	1
C203.6	2	1	1	1	-	-	-	-	2	1	-	-	1	1	1
C203	2	1	1	1	-	1	-	-	2	1	-	-	1	1	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6302 - Mechanics of Solids

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6302	Mechanics of Solids	C204.1: Describe the fundamental concepts of stress and strain in mechanics of solids and structures.
		C204.2: Explain about shear force and bending moment diagram for statically determinate beam with concentrated loads.
		C204.3: Illustrate the conjugate beam method for computation of slopes and deflection of determinate beams.
		C204.4: Demonstrate the stresses and deflection in circular solid and hollow shaft.
		C204.5: Describe about 2-D normal and shear stresses on any plane.
		C204.6: Describe the analysis of plane trusses, method of joints and method of sections.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6302															
C204.1	3	2	1	1	-	-	-	-	1	2	-	1	2	2	1
C204.2	3	2	1	1	-	-	-	-	1	2	-	1	2	2	1
C204.3	3	2	1	1	-	-	-	-	1	2	-	1	2	2	1
C204.4	3	2	1	1	-	-	-	-	1	2	-	1	2	2	1
C204.5	3	2	1	1	-	-	-	-	1	2	-	1	2	2	1
C204.6	3	2	1	1	-	-	-	-	1	2	-	1	2	2	1
C204	3	2	1	1	-	-	-	-	1	2	-	1	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6303 - Mechanics of Fluids

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6303	Mechanics of Fluids	C205.1: Explain about basics of fluids-definition & distinction between solid and fluid.
		C205.2: Illustrate the fluid kinematics, flow visualization, lines and types of flow
		C205.3: Demonstrate the laminar flow between parallel plates and circular tubes.
		C205.4: Explain the boundary layer separation and control, draft in flat plate & lift co-efficient.
		C205.5: Demonstrate the fundamental dimensions, dimensional homogeneity, Rayleigh's method & Buckingham pi-theorem.
		C205.6: Explain about the dimensionless parameters, similitude, model studies and distorted models.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6303															
C205.1	3	2	2	2	-	-	-	1	1	1	-	1	2	2	1
C205.2	3	2	2	2	-	-	-	1	1	1	-	1	2	2	1
C205.3	3	2	2	2	-	-	-	1	1	1	-	1	2	2	1
C205.4	3	2	2	2	-	-	-	1	-	1	-	1	2	2	-
C205.5	3	2	2	2	-	-	-	1	1	1	-	1	2	2	1
C205.6	3	2	2	2	-	-	-	1	1	1	-	1	2	2	1
C205	3	2	2	2	-	-	-	1	1	1	-	1	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6304-Surveying-I

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6304	Surveying-I	C206.1: Explain the basic principles, equipment and accessories for ranging and chaining methods.
		C206.2: Describe the compass surveying to measure angles, bearings & methods of plane table surveying.
		C206.3: Illustrate about the curvature and refraction, sources of error in leveling and reciprocal levelling.
		C206.4: Demonstrate the longitudinal and cross sectional plotting and contouring methods.
		C206.5: Explain the horizontal and vertical angle determination by using theodolite.
		C206.6: Describe the temporary and permanent adjustment of theodolite.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6304																
C206.1	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1	
C206.2	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1	
C206.3	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1	
C206.4	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1	
C206.5	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1	
C206.6	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1	
C206	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1	

*3-High correlation; *2-Medium correlation; *1-Low correlation


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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6311 Survey Practical I

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6311	Survey Practical I	C207.1: Explain the basics of chaining and its accessories, aligning & ranging.
		C207.2: Illustrate the chain and compass traversing.
		C207.3: Demonstrate the plane table methods like radiation, intersection, traversing and resection.
		C207.4 : Explain basic concepts of levels, leveling staff, fly level and dumpy level.
		C207.5: Describe the check leveling, Longitudinal & Cross section.
		C207.6: Explain contouring and study of theodolite.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6311															
C207.1	2	1	1	1	-	-	-	-	1	1	2	1	1	2	1
C207.2	2	1	1	1	-	-	-	-	1	1	2	1	1	2	1
C207.3	2	1	1	1	-	-	-	-	1	1	2	1	1	2	1
C207.4	2	1	1	1	-	-	-	-	1	1	2	1	1	2	1
C207.5	2	1	1	1	1	-	-	-	1	1	2	1	1	2	1
C207.6	2	1	1	1	1	-	-	-	1	1	2	1	1	2	1
C207	2	1	1	1	1	-	-	-	1	1	2	1	1	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6312 Computer Aided Building Drawing

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6312	Computer Aided Building Drawing	C208.1: Explain the principles of planning, orientation and complete joinery details.
		C208.2: Illustrate the building with load bearing walls.
		C208.3: Explain the building with sloping roof.
		C208.4: Describe the reinforced cement concrete structures.
		C208.5: Demonstrate about industrial building north light roof structure.
		C208.6: Explain about the building information modeling.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6312															
C208.1	3	3	2	1	1	-	-	-	2	1	1	2	2	1	2
C208.2	3	3	2	1	1	-	-	-	2	1	1	2	2	1	2
C208.3	3	3	2	1	1	-	-	-	2	1	1	2	2	1	2
C208.4	3	3	2	1	1	-	-	-	2	1	1	2	2	1	2
C208.5	3	3	2	1	1	-	-	-	2	1	1	2	2	1	2
C208.6	3	3	2	1	1	-	-	-	2	1	1	2	2	1	2
C208	3	3	2	1	1	-	-	-	2	1	1	2	2	1	2

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REGULATION 2013 – CO PO MAPPING

IV SEMESTER

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

MA6459-Numerical Methods

Course Code	Course Name	Course Outcome (CO) Students will be able to
MA6459	Numerical Methods	C209.1: Explain the basic concepts and techniques for solving algebraic and transcendental equations.
		C209.2: Demonstrate the numerical techniques of interpolation and error approximations in various intervals in real life situations
		C209.3: Illustrate the numerical techniques of differentiation and integration for engineering problems
		C209.4: Describe the knowledge of various techniques and methods for solving first and second order ordinary differential equations.
		C209.5: Explain the partial and ordinary differential equations with initial and boundary conditions by using certain techniques with engineering applications.
		C209.6: Illustrate dimensional Laplace's and Poisson's equation problems on rectangular domain

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
MA6459															
C209.1	3	2	1	1	-	-	-	-	1	1	-	-	-	1	-
C209.2	3	2	1	1	-	-	-	-	1	1	-	-	-	1	-
C209.3	3	2	1	1	-	-	-	-	1	1	-	-	-	1	-
C209.4	3	2	1	1	-	-	-	-	1	1	-	-	-	1	-
C209.5	3	2	1	1	-	-	-	-	1	1	-	-	-	1	-
C209.6	3	2	1	1	-	-	-	-	1	1	-	-	-	1	-
C209	3	2	1	1	-	-	-	-	1	1	-	-	-	1	-

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6401- Construction Materials

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6401	Construction Materials	C210.1: Explain about the selection of material and tests on stone and building materials.
		C210.2: Demonstrate the preparation and manufacturing processes of lime mortar, cement.
		C210.3: Describe about the flow, compaction factor & properties of hardened concrete.
		C210.4: Explain the basic concepts of panels of laminates, steels, aluminum and other metallic materials.
		C210.5: Describe about the basics of fiber, glass reinforced plastic, clay product, refractoriness and composite materials.
		C210.6: Illustrate the applications of laminar composites and fiber textiles.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6401															
C210.1	2	1	1	1	-	-	-	-	1	-	-	1	1	1	2
C210.2	2	2	1	1	-	-	-	-	1	-	-	1	1	1	2
C210.3	2	2	1	1	-	-	-	-	1	-	-	1	1	1	2
C210.4	2	2	1	1	-	-	-	-	1	-	-	1	1	1	2
C210.5	2	2	1	1	-	-	-	-	1	-	-	1	1	1	2
C210.6	2	2	1	1	-	-	-	-	1	-	-	1	1	1	2
C210	2	2	1	1	-	-	-	-	1	-	-	1	1	1	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6402 - Strength of Materials

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6402	Strength of Materials	C211.1: Explain about the strain energy and strain energy density.
		C211.2: Demonstrate the propped cantilever, fixed beams, fixed end moment and reactions.
		C211.3: Describe the Euler's theory of long columns, critical loads for prismatic columns with different end conditions.
		C211.4: Determination of principal stresses and principal planes.
		C211.5: Describe the unsymmetrical bending of beams and also symmetrical and unsymmetrical sections.
		C211.6: Solve the shear centre of curved beams using Winkler batch formula.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
C211.1	3	2	2	-	-	-	-	-	1	1	1	1	2	2	1
C211.2	3	2	2	-	-	-	-	-	1	1	1	1	2	2	1
C211.3	3	2	2	-	-	-	-	-	1	1	1	1	2	2	1
C211.4	3	2	2	-	-	-	-	-	1	1	1	1	2	2	1
C211.5	3	2	2	-	-	-	-	-	1	1	1	1	2	2	1
C211.6	3	2	2	-	-	-	-	-	1	1	1	1	2	2	1
C211	3	2	2	-	-	-	-	-	1	1	1	1	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6403 Applied Hydraulic Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6403	Applied Hydraulic Engineering	C212.1: Explain the basic concepts & differences between pipe flow and open channel flow.
		C212.2: Describe the dynamic equations of gradually varied and spatially varied flows.
		C212.3: Illustrate the basic applications of energy equation & RVF.
		C212.4: Demonstrate the impact of jet on vanes, turbines & classification of turbines.
		C212.5: Describe the minimum speed to start the pump & cavitations in pumps .
		C212.6: Explain the basics of flow separation conditions, air vessels, indicator diagrams and its variations.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6403															
C212.1	3	2	1	1	-	-	-	1	1	1	-	1	2	2	1
C212.2	3	2	1	1	-	-	-	1	1	1	-	1	2	2	1
C212.3	3	2	1	1	-	-	-	1	1	1	-	1	2	2	1
C212.4	3	2	1	1	-	-	-	1	1	1	-	1	2	2	1
C212.5	3	2	1	1	-	-	-	1	1	1	-	1	2	2	1
C212.6	3	2	1	1	-	-	-	1	1	1	-	1	2	2	1
C212	3	2	1	1	-	-	-	1	1	1	-	1	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6404 Surveying II

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6404	Surveying II	C213.1: Describe the horizontal & vertical control methods.
		C213.2: Illustrate the sources, precautions, corrections and classification of errors .
		C213.3: Explain about the electro optical system and its working principle and sources of error .
		C213.4: Describe basic concepts of space, control and user segments of GPS.
		C213.5: Demonstrate the route survey for highway, railway and waterways.
		C213.6: Describe the fundamentals of photogrammetric and remote sensing.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6404															
C213.1	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1
C213.2	2	1	1	1	-	-	-	-	-	1	1	1	2	1	1
C213.3	2	1	1	1	1	-	-	-	-	1	1	1	2	1	1
C213.4	2	1	1	1	1	-	-	-	-	1	1	1	2	1	1
C213.5	2	1	1	1	1	-	-	-	-	1	1	1	2	1	1
C213.6	2	1	1	1	1	-	-	-	-	1	1	1	2	1	1
C213	2	1	1	1	1	-	-	-	-	1	1	1	2	1	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6405 Soil Mechanics

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6405	Soil Mechanics	C214.1: Explain the index properties of soil, BIS classification system & soil compaction.
		C214.2: Describe the basic concepts of soil water, static pressure in water & effective stress concept in soil.
		C214.3: Illustrate the stress distribution, soil media & Boussinsq theory.
		C214.4: Demonstrate the shear strength of cohesive & cohesion less soil.
		C214.5: Explain the slope failure mechanisms types and solve infinite & finite slopes.
		C214.6: Describe the friction circle method, stability number & slope protection measures.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6405																
C214.1	3	2	2	1	-	-	-	-	1	1	1	1	2	1	1	
C214.2	3	2	2	1	-	-	-	-	1	1	1	1	2	1	1	
C214.3	3	2	2	1	-	-	-	-	1	1	1	1	2	1	1	
C214.4	3	2	2	1	-	-	-	-	1	1	1	1	2	1	1	
C214.5	3	2	2	1	-	-	-	-	1	1	1	1	2	1	1	
C214.6	3	2	2	1	-	-	-	-	1	1	1	1	2	1	1	
C214	3	2	2	1	-	-	-	-	1	1	1	1	2	1	1	

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6411- Strength of Materials Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6411	Strength of Materials Laboratory	C215.1: Explain the test on mild steel rod & compression test on wood.
		C215.2: Illustrate the double shear test on metal & torsion test on mild steel rod.
		C215.3: Demonstrate the impact test on metal specimen & hardness test on metals.
		C215.4: Describe the deflection test on metal beam & compression test on helical spring.
		C215.5: Explain the deflection test on carriage spring.
		C215.6: Illustrate about the various types of test on cement.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6411															
C215.1	3	2	2	1	-	-	-	-	2	1	2	2	1	3	2
C215.2	3	2	2	1	-	-	-	-	2	1	2	2	1	3	2
C215.3	3	2	2	1	-	-	-	-	2	1	2	2	1	3	2
C215.4	3	2	2	1	-	-	-	-	2	1	2	2	1	3	2
C215.5	3	2	2	1	-	-	-	-	2	1	2	2	1	3	2
C215.6	3	2	2	1	-	-	-	-	2	1	2	2	1	3	2
C215	3	2	2	1	-	-	-	-	2	1	2	2	1	3	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6412 Hydraulic Engineering Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6412	Hydraulic Engineering Laboratory	C216.1: Explain about the flow measurement like calibration of rotometer & flow through venture meter & orifice meter.
		C216.2: Demonstrate the flow through variable duct area, orifice, mouth piece & notches.
		C216.3: Illustrate the losses in pipes like determination of friction co-efficient in pipes.
		C216.4: Describe the characteristics of centrifugal pumps, gear pumps, submersible pumps & reciprocating pump.
		C216.5: Explain the characteristics of pelton wheel turbine, francis turbine and Kaplan turbine.
		C216.6: Demonstrate the metacentric height.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6412															
C216.1	3	2	2	1	-	-	-	1	1	1	1	1	1	1	2
C216.2	3	2	2	1	-	-	-	1	1	1	1	1	1	1	2
C216.3	3	2	2	1	-	-	-	1	1	1	1	1	1	1	2
C216.4	3	2	2	1	-	-	-	1	1	1	1	1	1	1	2
C216.5	3	2	2	1	-	-	-	1	1	1	1	1	1	1	2
C216.6	3	2	2	1	-	-	-	1	1	1	1	1	1	1	2
C216	3	2	2	1	-	-	-	1	1	1	1	1	1	1	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6413- Survey Practical II

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6413	Survey Practical II	C217.1: Explain the basics of theodolites their setting and their adjustments.
		C217.2: Demonstrate the measurements of horizontal angle by reiteration, repetition and vertical angles.
		C217.3: Illustrate about the theodolite survey traverse, find height and distances of land and single plane method.
		C217.4: Describe the tachometry tangential and stadia system.
		C217.5: Explain the setting out works, foundation marking, simple & transition curve.
		C217.6: Demonstrate the field observation for calculation of azimuth & field work using total station.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6413															
C217.1	2	1	1	1	-	-	-	-	1	1	1	1	2	1	1
C217.2	2	1	1	1	-	-	-	-	1	1	1	1	2	1	1
C217.3	2	1	1	1	-	-	-	-	1	1	1	1	2	1	1
C217.4	2	1	1	1	-	-	-	-	1	1	1	1	2	1	1
C217.5	2	1	1	1	1	-	-	-	1	1	1	1	2	1	1
C217.6	2	1	1	1	1	-	-	-	1	1	1	1	2	1	1
C217	2	1	1	1	1	-	-	-	1	1	1	1	2	2	1

*3-High correlation; *2-Medium correlation; *1-Low correlation


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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013 – CO PO MAPPING

V SEMESTER

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6501-Structural Analysis I

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6501	Structural Analysis I	C301.1: Explain the Degree of static & kinematic indeterminacies for plane frames.
		C301.2: Demonstrate the influence lines for reactions in statically determinate structures.
		C301.3: Illustrate about the arches as structural forms, examples of arch structures and types of arches.
		C301.4: Analyse the continuous beams and rigid frames with & without sway.
		C301.5: Solve the distribution factor, carryover of moments, stiffness & carryover factor using moment distribution method
		C301.6: Analyse the continuous beams, plane rigid frame with & without sway.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6501															
C301.1	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C301.2	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C301.3	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C301.4	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C301.5	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C301.6	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C301	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6502-Foundation Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6502	Foundation Engineering	C302.1: Explain about the site investigation, selection of foundation & methods of exploration.
		C302.2: Illustrate the location & depth of foundation & bearing capacity of shallow foundation on homogeneous deposits.
		C302.3: Demonstrate the types of footings & contact pressure distribution
		C302.4: Describe the types of pile & their functions & factors influencing the selection of pile.
		C302.5: Explain the plastic equilibrium of soils in active & passive states.
		C302.6: Illustrate the earth pressure on retaining walls of simple configurations & culmann graphical method.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6502															
C302.1	3	2	2	1	-	-	-	-	1	1	1	1	3	2	2
C302.2	3	2	2	1	-	-	-	-	1	1	1	1	3	2	2
C302.3	3	2	2	1	-	-	-	-	1	1	1	1	3	2	2
C302.4	3	2	2	1	-	-	-	-	1	1	1	1	3	2	2
C302.5	3	2	2	1	-	-	-	-	1	1	1	1	3	2	2
C302.6	3	2	2	1	-	-	-	-	1	1	1	1	3	2	2
C302	3	2	2	1	-	-	-	-	1	1	1	1	3	2	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6503- Environmental Engineering I

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6503	Environmental Engineering I	C303.1: Explain about the public water supply system and also planning objectives & design period of water supply system.
		C303.2: Demonstrate about the water supply, intake structures and their functions & conduits for water.
		C303.3: Illustrate the water treatment unit operations, processes, principles, functions and design of chemical feeding.
		C303.4: Explain the principles & functions of aeration and also removal of manganese & iron.
		C303.5: Describe the requirements of water distribution system, and their functions & drawings.
		C303.6: Explain the principles & design of water supply in buildings, house service connection, fixtures & fittings.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6503															
C303.1	3	2	1	1	-	2	2	1	1	-	1	1	3	2	2
C303.2	3	2	1	1	-	2	2	1	1	-	1	1	3	2	2
C303.3	3	2	1	1	-	2	2	1	1	-	1	1	3	2	2
C303.4	3	2	1	1	-	2	2	1	1	-	1	1	3	2	2
C303.5	3	2	1	1	-	2	2	1	1	-	1	1	3	2	2
C303.6	3	2	1	1	-	2	2	1	1	-	1	1	3	2	2
C303	3	2	1	1	-	2	2	1	1	-	1	1	3	2	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6504-Highway Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6504	Highway Engineering	C304.1: Explain about the significance of highway planning, model limitations towards sustainability.
		C304.2: Illustrate about the cross sectional elements, sight distances, horizontal curves, super elevation & transition curves.
		C304.3: Demonstrate the design principles of flexible & rigid pavements.
		C304.4: Explain about the highway construction materials, properties, testing methods & CBR test for subgrade.
		C304.5: Describe the pavement distress in flexible and rigid pavements & pavement management system.
		C304.6: Illustrate about the skid resistance, structural evaluation & evaluation by deflection measurements.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6504															
C304.1	3	2	2	2	-	-	-	-	1	1	1	1	2	1	1
C304.2	3	2	2	2	-	-	-	-	1	1	1	1	2	1	1
C304.3	3	2	2	2	-	-	-	-	1	1	1	1	2	1	1
C304.4	3	2	2	2	-	1	-	-	1	1	1	1	2	1	1
C304.5	3	2	2	2	-	-	-	-	1	1	1	1	2	1	1
C304.6	3	2	2	2	-	-	-	-	1	1	1	1	2	1	1
C304	3	2	2	2	-	1	-	-	1	1	1	1	2	1	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6505- Design of Reinforced Concrete Elements

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6505	Design of Reinforced Concrete Elements	C305.1: Describe the basic concepts of elastic method, ultimate load method & limit state method.
		C305.2: Analysis & design of singly & doubly reinforced rectangular and flanged beams.
		C305.3: Illustrate the behaviour of RC members in bond & anchorage.
		C305.4: Explain the types of columns, braced and unbraced columns & design of short rectangular and circular columns for axial, uniaxial and bi axial bending.
		C305.5: Demonstrate the design of wall footing.
		C305.6: Design of axially and eccentrically loaded rectangular pad & sloped footings.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6505															
C305.1	3	3	3	2	-	-	-	-	2	-	1	1	2	2	1
C305.2	3	3	3	2	-	-	-	-	2	-	1	1	2	2	1
C305.3	3	3	3	2	-	-	-	-	2	-	1	1	2	2	1
C305.4	3	3	3	2	-	-	-	-	2	-	1	1	2	2	1
C305.5	3	3	3	2	-	-	-	-	2	-	1	1	2	2	1
C305.6	3	3	3	2	-	-	-	-	2	-	1	1	2	2	1
C305	3	3	3	2	-	-	-	-	2	-	1	1	2	2	1

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REGULATION 2013- PO CO MAPPING

CE6506 Construction Techniques, Equipment And Practice

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6506	Construction Techniques, Equipment And Practice	C306.1: Describe about the compaction, curing & finishing & tesing of fresh & hardened concrete..
		C306.2: Illustrate the specifications, details & sequence of activities and construction co-ordination.
		C306.3: Explain the techniques of box jacking, pipe jacking and also under water construction of diaphragm walls and basement.
		C306.4: Demonstrate the launching girders, bridge deck & off shore platforms.
		C306.5: Describe the selection of equipment for earth work & earth moving operations
		C306.6: Illustrate about the equipments used for foundation and pile driving and also equipments used for compaction, batching, mixing & concreting.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6506															
C306.1	2	1	1	1	-	-	-	-	1	1	1	1	1	1	2
C306.2	2	1	1	1	-	-	-	-	1	1	1	1	1	1	2
C306.3	2	1	1	1	-	-	-	-	1	1	1	1	1	1	2
C306.4	2	1	1	1	-	-	-	-	1	1	1	1	1	1	2
C306.5	2	1	1	1	-	-	-	-	1	1	1	1	1	1	2
C306.6	2	1	1	1	-	-	-	-	1	1	1	1	1	1	2
C306	2	1	1	1	-	-	-	-	1	1	1	1	1	1	2

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REGULATION 2013- PO CO MAPPING

GE6563 Communication Skills- Laboratory Based

Course Code	Course Name	Course Outcome (CO) Students will be able to
GE6563	Communication Skills- Laboratory Based	C307.1: Explain listening and note taking & listening to telephonic conversations.
		C307.2: Describe conversation practice, interview, group discussion and introducing oneself and others.
		C307.3: Illustrate different genres of text like literature, media & technical.
		C307.4: Demonstrate blogs, tweets, online resume and e-mails and SMS & online texting.
		C307.5: Explain idioms and phrases, proverbs, collocations, chunks of language.
		C307.6: Illustrate sentence structures, subject verb agreement, pronoun and antecedent agreement.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
GE6563															
C307.1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
C307.2	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-
C307.3	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
C307.4	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-
C307.5	-	-	-	-	1	1	1	-	1	1	-	-	-	-	-
C307.6	-	-	-	-	-	1	1	1	1	1	-	-	-	-	-
C307	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-

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REGULATION 2013- PO CO MAPPING

CE6511-Soil Mechanics Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6511	Soil Mechanics Laboratory	C308.1: Determine the index properties of soils like, specific gravity of soil solids and sieve analysis.
		C308.2: Illustrate the liquid limit, plastic limit, shrinkage limit and differential free swell tests.
		C308.3: Describe insitu density and compaction characteristics like field density test.
		C308.4: Demonstrate the moisture content density relationship using standard proctor compaction test.
		C308.5: Explain engineering properties like permeability and one dimensional consolidation test.
		C308.6: Illustrate triaxial compression test in cohesion less soil & California bearing ratio test.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6511															
C308.1	3	2	2	1	-	-	-	-	1	-	-	1	1	1	2
C308.2	3	2	2	1	-	-	-	-	1	-	-	1	1	1	2
C308.3	3	2	2	1	-	-	-	-	1	-	-	1	1	1	2
C308.4	3	2	2	1	-	-	-	-	1	-	-	1	1	1	2
C308.5	3	2	2	1	-	-	-	-	1	-	-	1	1	1	2
C308.6	3	2	2	1	-	-	-	-	1	-	-	1	1	1	2
C308	3	2	2	1	-	-	-	-	1	-	-	1	1	1	2

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REGULATION 2013- PO CO MAPPING

CE6512 - Survey Camp

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6512	Survey Camp	C309.1: Describe the chaining like length & area calculation.
		C309.2: Illustrate the ranging like direct and indirect ranging.
		C309.3: Demonstrate the leveling like fly and check leveling.
		C309.4: Explain about the contouring like grid & radial contouring.
		C309.5: Describe the triangulation.
		C309.6: Explain the trilateration and rectangulation.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6512															
C309.1	3	2	1	1	-	-	-	-	1	1	1	1	1	-	1
C309.2	3	2	1	1	-	-	-	-	1	1	1	1	1	-	1
C309.3	3	2	1	1	-	-	-	-	1	1	1	1	1	-	1
C309.4	3	2	1	1	1	-	-	-	1	1	1	1	1	-	1
C309.5	3	2	1	1	1	-	-	-	1	1	1	1	1	-	1
C309.6	3	2	1	1	1	-	-	-	1	1	1	1	1	-	1
C309	3	2	1	1	1	-	-	-	1	1	1	1	1	-	1

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REGULATION 2013 – CO PO MAPPING

VI SEMESTER

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6601 - Design of Reinforced Concrete & Brick Masonry Structures

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6601	Design of Reinforced Concrete & Brick Masonry Structures	C310.1: Design of cantilever & counterfort retaining walls.
		C310.2: Design of rectangular & circular water tanks both below & above ground level.
		C310.3: Design of staircases, flat slabs & principle of design of mat foundation.
		C310.4: Describe the characteristics of yield line , collapse load & plastic moment.
		C310.5: Demonstrate the classification of walls, lateral supports, stability & effective height of wall & columns.
		C310.6: Describe the effective length of walls, design loads, load dispersion & permissible stresses.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6601															
C310.1	3	3	2	1	-	-	-	-	1	-	-	1	3	3	2
C310.2	3	3	2	1	-	-	-	-	1	-	-	1	3	3	2
C310.3	3	3	2	1	-	-	-	-	1	-	-	1	3	3	2
C310.4	3	3	2	1	-	-	-	-	1	-	-	1	3	3	2
C310.5	3	3	2	1	-	-	-	-	1	-	-	1	3	3	2
C310.6	3	3	2	1	-	-	-	-	1	-	-	1	3	3	2
C310	3	3	2	1	-	-	-	-	1	-	-	1	3	3	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6602-Structural Analysis II

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6602	Structural Analysis II	C311.1: Explain about the equilibrium, compactability, determinate & indeterminate structures.
		C311.2: Analyse continuous beam & co ordinate transformations.
		C311.3: Explain the discretisation of structures, displacement functions of truss & beam element.
		C311.4: Illustrate the statically indeterminate axial problems & pure bending in beam.
		C311.5: Analyse the space trusses using method of tension co efficient.
		C311.6: Explain the beams in curved plan, suspension cables, suspension bridges with two & three hinged stiffening girders.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6602															
C311.1	3	3	2	2	-	1	-	-	2	1	1	1	2	2	1
C311.2	3	3	2	2	-	1	-	-	2	1	1	1	2	2	1
C311.3	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C311.4	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C311.5	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C311.6	3	3	2	2	-	-	-	-	2	1	1	1	2	2	1
C311	3	3	2	2	-	1	-	-	2	1	1	1	2	2	1

*3-High correlation; *2-Medium correlation; *1-Low correlation

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6603- Design of Steel Structures

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6603	Design of Steel Structures	C312.1: Explain the properties of steel, structural steel sections & limit state design concepts.
		C312.2: Describe the types of sections & net area, net effective area for angle and Tee in tension.
		C312.3: Illustrate the types of compression members, theory of columns & basis of current codal provisions for compression member design.
		C312.4: Design the laterally supported and unsupported beams and built up beams.
		C312.5: Demonstrate the roof trusses & roof side coverings.
		C312.6: Design the purlin & element of truss, end bearing & design of gantry girder.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6603																
C312.1	3	3	3	2	-	-	-	-	1	2	1	1	3	2	2	
C312.2	3	3	3	2	-	-	-	-	1	2	1	1	3	2	2	
C312.3	3	3	3	2	-	-	-	-	1	2	1	1	3	2	2	
C312.4	3	3	3	2	-	-	-	-	1	2	1	1	3	2	2	
C312.5	3	3	3	2	-	-	-	-	1	2	1	1	3	2	2	
C312.6	3	3	3	2	-	-	-	-	1	2	1	1	3	2	2	
C310	3	3	3	2	-	-	-	-	1	2	1	1	3	2	2	

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6604- Railways, Airports and Harbour Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6604	Railways, Airports and Harbour Engineering	C313.1: Describe about the significance of road, rail, air and water transports.
		C313.2: Demonstrate the earthwork, stabilization of track on poor soil & tunneling methods, drainage & ventilation.
		C313.3: Illustrate the air transport characteristics, classification & planning.
		C313.4: Explain the runway design, orientation, wind rose diagram & runway length.
		C313.5: Describe the harbour, port, satellite port, docks, waves & tides.
		C313.6: Demonstrate piers, break waters, wharves, jetties, quays and spring fenders.

CO-PO MAPPING

CO	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6604															
C313.1	2	2	1	1	-	1	1	1	1	1	1	1	2	2	1
C313.2	2	2	1	1	-	1	1	1	1	1	1	1	2	2	1
C313.3	2	2	1	1	-	1	1	1	1	1	1	1	2	2	1
C313.4	2	2	1	1	-	1	1	1	1	1	1	1	2	2	1
C313.5	2	2	1	1	-	1	1	1	1	1	1	1	2	2	1
C313.6	2	2	1	1	-	1	1	1	1	1	1	1	2	2	1
C313	2	2	1	1	-	1	1	1	1	1	1	1	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6605- Environmental Engineering II

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6605	Environmental Engineering II	C314.1: Explain about the planning for sewerage system like sources of water generation, effects & estimation of sanitary sewage flow.
		C314.2: Illustrate the hydraulics of flow in sewers, objectives, design Period & design of sanitary & storm sewers.
		C314.3: Demonstrate the selection of treatment process, principles, functions, design & drawing of units primary treatment sewage.
		C314.4: Describe the selection of treatment methods, principles, functions, design & drawing of units of secondary treatment sewage.
		C314.5: Explain the standards for disposal, methods, dilution & self purification of surface water bodies.
		C314.6: Describe the sludge digestion, bio gas recovery, sludge conditioning & dewatering.

CO-PO MAPPING

CO	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6503																
C314.1	2	2	1	1	-	1	1	1	-	-	1	1	2	2	2	
C314.2	2	2	1	1	-	1	1	1	-	-	1	1	2	2	2	
C314.3	2	2	1	1	-	1	1	1	-	-	1	1	2	2	2	
C314.4	2	2	1	1	-	1	1	1	-	-	1	1	2	2	2	
C314.5	2	2	1	1	-	1	1	1	-	-	1	1	2	2	2	
C314.6	2	2	1	1	-	1	1	1	-	-	1	1	2	2	2	
C314	2	2	1	1	-	1	1	1	-	-	1	1	2	2	2	

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6002 Concrete Technology

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6002	Concrete Technology	C315.1: Explain the different types, chemical composition & properties of cement.
		C315.2: Demonstrate the accelerators, retarders, plasticizers, super plasticizers, water proofers, chemical & mineral admixtures.
		C315.3: Describe the principles of mix proportioning, properties of concrete related to mix design & physical properties of materials required for mix design.
		C315.4: Illustrate the workability, slump test, compaction factor test, segregation & bleeding of fresh concrete.
		C315.5: Explain the light weight & high strength concrete.
		C315.6: Describe the special concrete like shotcrete, polymer concrete & high performance concrete.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6002															
C315.1	2	2	1	1	-	-	-	-	2	1	1	1	1	1	2
C315.2	2	2	1	1	-	-	-	-	2	1	1	1	1	1	2
C315.3	2	2	1	1	-	-	-	-	2	1	1	1	1	1	2
C315.4	2	2	1	1	-	-	-	-	2	1	1	1	1	1	2
C315.5	2	2	1	1	-	-	-	-	2	1	1	1	1	1	2
C315.6	2	2	1	1	-	-	-	-	2	1	1	1	1	1	2
C315	2	2	1	1	-	-	-	-	2	1	1	1	1	1	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6611- Environmental Engineering Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6611	Environmental Engineering Laboratory	C316.1: Find out the ammonia nitrogen in water, coagulation & precipitation process for treating waste water.
		C316.2: Describe the suspended, volatile, fixed & settleable solids in waste water.
		C316.3: Explain about the B.O.D & C.O.D test.
		C316.4: Demonstrate the nitrate & phosphate in waste water.
		C316.5: Explain about the calcium, potassium and sodium.
		C316.6: Illustrate the heavy metal determination like chromium

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6611																
C316.1	3	2	1	1	-	2	2	1	1	1	1	1	1	1	1	2
C316.2	3	2	1	1	-	2	2	1	1	1	1	1	-	1	1	2
C316.3	3	2	1	1	-	2	2	1	1	1	1	1	-	1	1	2
C316.4	3	2	1	1	-	2	2	1	1	1	1	1	1	1	1	2
C316.5	3	2	1	1	-	2	2	1	1	1	1	1	1	1	1	2
C316.6	3	2	1	1	-	2	2	1	1	1	1	1	1	1	1	2
C316	3	2	1	1	-	2	2	1	1	1	1	1	1	1	1	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6612- Concrete and Highway Engineering Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6612	Concrete and Highway Engineering Laboratory	C317.1: Describe the test on fresh concrete like slump cone, flow table, compaction factor test & vee bee test.
		C317.2: Demonstrate the compressive strength of cube & cylinder and flexure & modulus of rigidity of hardened concrete.
		C317.3: Illustrate the specific gravity, grading, crushing strength, abrasion & impact value test on aggregate.
		C317.4: Describe the penetration, softening point, ductility, flash & fire points test on bitumen.
		C317.5: Explain the binder content on bituminous mixes.
		C317.6: Illustrate the marshall stability, flow values and density of bituminous mixes.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6612															
C317.1	3	2	2	1	-	-	-	-	1	1	1	1	1	1	2
C317.2	3	2	2	1	-	-	-	-	1	1	1	1	1	1	2
C317.3	3	2	2	1	-	-	-	-	1	1	1	1	1	1	2
C317.4	3	2	2	1	-	-	-	-	1	1	1	1	1	1	2
C317.5	3	2	2	1	-	-	-	-	1	1	1	1	1	1	2
C317.6	3	2	2	1	-	-	-	-	1	1	1	1	1	1	2
C317	3	2	2	1	-	-	-	-	1	1	1	1	1	1	2

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REGULATION 2013 – CO PO MAPPING

VII SEMESTER

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REGULATION 2013- PO CO MAPPING

CE6701-Structural Dynamics and Earthquake Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6701	Structural Dynamics and Earthquake Engineering	C401.1: Explain & differentiate the static & dynamic loading, degree of freedom & idealization of structure as single degree of freedom system.
		C401.2: Describe two degree of freedom system, mode of vibrations, formulation of equation of motion of multi degree of freedom system.
		C401.3: Demonstrate the elements of engineering seismology, causes of earthquake & plate tectonic theory.
		C401.4: Explain effect of earthquake on different types of structures & behaviour of reinforced cement concrete elements.
		C401.5: Illustrate the causes of damage, planning considerations & earthquake resistant design of masonry structures.
		C401.6: Describe the reinforced concrete buildings, lateral load analysis, design & detailing.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE 6701																
C401.1	3	2	2	1	-	-	-	1	1	1	-	-	3	2	2	
C401.2	3	2	2	1	-	-	-	1	1	1	-	-	3	2	2	
C401.3	3	2	2	1	-	-	-	1	1	1	-	-	3	2	2	
C401.4	3	2	2	1	-	-	-	1	1	1	-	-	3	2	2	
C401.5	3	2	2	1	-	-	-	1	1	1	-	-	3	2	2	
C401.6	3	2	2	1	-	-	-	1	1	1	-	-	3	2	2	
C401	3	3	2	1	-	-	-	1	1	1	-	-	3	3	2	

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6702 - Prestressed Concrete Structures

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6702	Prestressed Concrete Structures	C402.1: Describe the basic concepts, advantages, materials required, system & methods of prestressing.
		C402.2: Explain basic assumptions for calculating flexural stresses & permissible stress in steel & concrete.
		C402.3: Demonstrate the factors influencing deflections & short term deflections of uncracked members.
		C402.4: Analyse & design of composite beams & methods of achieving continuity in continuous beams.
		C402.5: Design of tension & compression members.
		C402.6: Illustrate the methods of achieving partial prestressing, merits & demerits of partial prestressing.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6702															
C402.1	3	2	1	1	-	-	-	-	-	1	1	-	2	2	1
C402.2	3	2	1	1	-	-	-	-	-	1	1	-	2	2	1
C402.3	3	2	1	1	-	-	-	-	-	1	1	-	2	2	1
C402.4	3	2	1	1	-	-	-	-	-	1	1	-	2	2	1
C402.5	3	2	1	1	-	-	-	-	-	1	1	-	2	2	1
C402.6	3	2	1	1	-	-	-	-	-	1	1	-	2	2	1
C402	3	2	1	1	-	-	-	-	-	1	1	-	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6703 - Water Resources & Irrigation Engineering

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6703	Water Resources & Irrigation Engineering	C403.1: Describe the water resources survey & water resources of India & Tamilnadu.
		C403.2: Explain the economics of water resources planning & national water policy.
		C403.3: Demonstrate the irrigation engineering needs, merits & demerits.
		C403.4: Illustrate the different types of impounding structures.
		C403.5: Describe the lift irrigation, tank irrigation & well irrigation.
		C403.6: Illustrate the surface, sub surface & micro irrigation, merits demerits & irrigation scheduling.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6703															
C403.1	3	2	1	1	-	1	1	-	-	1	1	-	2	2	1
C403.2	3	2	1	1	-	1	1	-	-	1	1	-	2	2	1
C403.3	3	2	1	1	-	1	1	-	-	1	1	-	2	2	1
C403.4	3	2	1	1	-	1	1	-	-	1	1	-	2	2	1
C403.5	3	2	1	1	-	1	1	-	-	1	1	-	2	2	1
C403.6	3	2	1	1	-	1	1	-	-	1	1	-	2	2	1
C403	3	2	1	1	-	1	1	-	-	1	1	-	2	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING


CE6713 - Estimation and Quantity Surveying

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6713	Estimation and Quantity Surveying	C404.1: Explain about the calculation of quantities of brickwork, RCC, PCC, plastering, white washing & colour washing.
		C404.2: Demonstrate about the estimation of septic tank, soak pit, sanitary & water supply installation.
		C404.3: Estimate the rates, specifications, sources & preparation of detailed & general specifications.
		C404.4: Illustrate the basics of value engineering, capitalized value & depreciation.
		C404.5: Explain the principles for report preparation & report on estimate of residential building.
		C404.6: Describe about the roads, water supply & sanitary installation.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6713																
C404.1	2	2	1	1	-	-	-	-	1	1	1	1	2	2	1	
C404.2	2	2	1	1	-	-	-	-	1	1	1	1	2	2	1	
C404.3	2	2	1	1	-	-	-	-	1	1	1	1	2	2	1	
C404.4	2	2	1	1	-	-	-	-	1	1	1	1	2	2	1	
C404.5	2	2	1	1	-	-	-	-	1	1	1	1	2	2	1	
C404.6	2	2	1	1	-	-	-	-	1	1	1	1	2	2	1	
C404	2	2	1	1	-	-	-	-	1	1	1	1	2	2	1	

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING


CE6007- Housing Planning and Management

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6007	Housing Planning And Management	C405.1: Describe the basics concepts of house, home, house hold, apartments & multi storey building.
		C405.2: Demonstrate the basic concepts, contents, & standards for housing programming.
		C405.3: Illustrate the formulation of housing projects, land use & soil stability analysis.
		C405.4: Explain new construction techniques, cost effective modern materials & methods of construction.
		C405.5: Describe the evaluation of housing projects for sustainable principle.
		C405.6: Illustrate public private partnership projects & viability gap funding.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6007															
C405.1	2	1	1	-	-	-	-	-	2	1	-	-	1	1	2
C405.2	2	1	1	-	-	-	-	-	2	1	-	-	1	1	2
C405.3	2	1	1	-	-	-	-	-	2	1	-	-	1	1	2
C405.4	2	1	1	-	-	-	-	-	2	1	-	-	1	1	2
C405.5	2	1	1	-	-	-	-	-	2	1	-	-	1	1	2
C405.6	2	1	1	-	-	-	-	-	2	1	-	-	1	1	2
C405	2	1	1	-	-	-	-	-	2	1	-	-	1	1	2

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 Kaikkurichi - 622 303, Pudukkottai Dt.



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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6011- Air Pollution Management

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6011	Air Pollution Management	C406.1: Describe about the air pollutants, particulates & gaseous pollutants.
		C406.2: Demonstrate about the elements of atmosphere, meteorological factors & wind roses.
		C406.3: Illustrate the basic concepts of control, principles & design of control measures.
		C406.4: Explain air quality standards, air quality monitoring & preventive measures.
		C406.5: Describe about the sources of noise pollution.
		C406.6: Demonstrate the effects, assessment, standards, control methods & prevention of noise pollution.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6011															
C406.1	2	1	1	1	-	2	2	2	1	1	-	-	1	1	2
C406.2	2	1	1	1	-	2	2	2	1	1	-	-	1	1	2
C406.3	2	1	1	1	-	2	2	2	1	1	-	-	1	1	2
C406.4	2	1	1	1	-	2	2	2	1	1	-	-	1	1	2
C406.5	2	1	1	1	-	2	2	2	1	1	-	-	1	1	2
C406.6	2	1	1	1	-	2	2	2	1	1	-	-	1	1	2
C406	2	1	1	1	-	2	2	2	1	1	-	-	1	1	2

*3-High correlation; *2-Medium correlation; *1-Low correlation


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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6711- Computer Aided Design And Drafting Laboratory

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6711	Computer Aided Design and Drafting Laboratory	C407.1: Design & drawing of RCC cantilever & counter fort type retaining walls with reinforcement details.
		C407.2: Design of solid slab & RCC Tee beam bridges for IRC loading & reinforcement details.
		C407.3: Design & drafting of circular & rectangular water tank.
		C407.4: Design of plate girder bridges & truss girder bridges.
		C407.5: Design of detailed drawings including connections.
		C407.6: Design of hemispherical bottomed steel tank.

CO-PO MAPPING

CO	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6711															
C407.1	3	2	2	1	1	-	-	-	-	1	1	1	1	-	1
C407.2	3	2	2	1	1	-	-	-	-	1	1	1	1	-	1
C407.3	3	2	2	1	1	-	-	-	-	1	1	1	1	-	1
C407.4	3	2	2	1	1	-	-	-	-	1	1	1	1	-	1
C407.5	3	2	2	1	1	-	-	-	-	1	1	1	1	-	1
C407.6	3	2	2	1	1	-	-	-	-	1	1	1	1	-	1
C407	3	2	2	1	1	-	-	-	-	1	1	1	1	-	1

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REGULATION 2013- PO CO MAPPING

CE6712- Design Project

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6712	Design Project	408.1: Explain about the experience in designing various design problems related to Civil Engineering.
		408.2: Demonstrate the basic concepts of building design philosophies
		408.3: Illustrate the concept of codal provisions
		408.4: Demonstrate about the guidelines used for design procedure
		408.5: Describe about the creativity and presentation skills
		408.6: Explain the knowledge about the various planning and designing of softwares

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6712															
C408.1	3	3	3	2	1	2	-	1	3	3	1	1	2	2	1
C408.2	3	3	3	2	1	2	-	1	3	3	1	1	2	2	1
C408.3	3	3	3	2	-	-	-	1	3	3	1	1	2	2	1
C408.4	3	3	3	2	-	-	-	1	3	3	1	1	2	2	1
C408.5	3	3	3	2	-	-	-	1	3	3	1	1	2	2	1
C408.6	3	3	3	2	1	2	-	-	3	3	1	1	2	2	1
C408	3	3	3	2	1	2	-	2	3	3	1	1	3	2	1

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013 – CO PO MAPPING

VIII SEMESTER

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

MG6851- Principles of Management

Course Code	Course Name	Course Outcome (CO) Students will be able to
MG6851	Principles of Management	<p>C409.1: Describe about the types of business organization, sole proprietorship, partnership, company-public & private sector enterprises.</p> <p>C409.2: Demonstrate the nature & purpose of planning, types & objective of planning.</p> <p>C409.3: Illustrate the nature & purpose, formal & informal organization.</p> <p>C409.4: Explain the foundations of individual & group behaviour, job satisfaction & job enrichment.</p> <p>C409.5: Describe the system & process of controlling, budgetary & non budgetary control techniques.</p> <p>C409.6: Illustrate about productivity problems & management.</p>

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
MG6851															
C409.1	3	2	2	2	-	-	-	1	1	2	2	-	2	2	1
C409.2	3	2	2	2	-	-	-	1	1	2	2	-	2	2	1
C409.3	3	2	2	2	-	-	-	1	1	2	2	-	2	2	1
C409.4	3	2	2	2	-	-	-	1	1	2	2	-	2	2	1
C409.5	3	2	2	2	-	-	-	1	1	2	2	-	2	2	1
C409.6	3	2	2	2	-	-	-	1	1	2	2	-	2	2	1
C409	3	2	2	2	-	-	-	1	1	2	2	-	2	2	2

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DEPARTMENT OF CIVIL ENGINEERING

REGULATION 2013- PO CO MAPPING

CE6016 - Prefabricated Structures

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6016	Prefabricated Structures	C410.1: Describe about the basic need for prefabrication, principles, materials & modular coordination.
		C410.2: Explain the behaviour of structural components & large panel construction.
		C410.3: Demonstrate disuniting of structures & design of cross section based on efficiency of material used.
		C410.4: Illustrate the joints for different structural connections, dimensions & detailing.
		C410.5: Explain progressive collapse & codal provisions.
		C410.6: Describe the equivalent design load for considering abnormal effects such as earthquake & cyclones etc.,

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CE6016															
C410.1	2	1	1	1	-	1	-	-	2	1	-	1	1	1	2
C410.2	2	1	1	1	-	1	-	-	2	1	-	1	1	1	2
C410.3	2	1	1	1	-	1	-	-	2	1	-	1	1	1	2
C410.4	2	1	1	1	-	1	-	-	2	1	-	1	1	1	2
C410.5	2	1	1	1	-	1	-	-	2	1	-	1	1	1	2
C410.6	2	1	1	1	-	1	-	-	2	1	-	1	1	1	2
C410	2	2	1	1	-	1	-	-	2	1	-	1	1	1	1

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REGULATION 2013- PO CO MAPPING

CE6021- Repair & Rehabilitation of Structures

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6021	Repair & Rehabilitation of Structures	C411.1: Describe the Maintenance, Repair & rehabilitation, facets of maintenance & importance of maintenance.
		C411.2: Explain the quality assurance for concrete, strength, durability & thermal properties of concrete.
		C411.3: Demonstrate the Special concrete like polymer concrete, sulphur infiltrated concrete & fiber reinforced concrete.
		C411.4: Illustrate the techniques for repair & protection methods.
		C411.5: Explain the strengthening of structural elements & repair of structures.
		C411.6: Describe the demolition techniques & case studies.

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6016																
C411.1	2	1	1	1	-	-	-	-	-	1	-	1	1	1	2	
C411.2	2	1	1	1	-	-	-	-	-	1	-	1	1	1	2	
C411.3	2	1	1	1	-	-	-	-	-	1	-	1	1	1	2	
C411.4	2	1	1	1	-	-	-	-	-	1	-	1	1	1	2	
C411.5	2	1	1	1	-	-	-	-	-	1	-	1	1	1	2	
C411.6	2	1	1	1	-	-	-	-	-	1	-	1	1	1	2	
C411	2	2	1	1	-	-	-	-	-	1	-	1	1	1	2	

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REGULATION 2013- PO CO MAPPING

CE6811-Project Work

Course Code	Course Name	Course Outcome (CO) Students will be able to
CE6811	Project Work	C412.1: Explain about the practical problems and find solution by formulating proper methodology.
		C412.2: Describe the solution by formulating proper methodology.
		C412.3: Demonstrate the importance of codal provisions
		C412.4: Illustrate the problem solving techniques in civil engineering
		C412.5: Explain the technical and presentation skills
		C412.6: Describe the solution for practical problems

CO-PO MAPPING

COs	PROGRAM OUTCOMES												PSO			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
CE6811																
C412.1	3	3	3	2	1	1	2	1	3	3	1	1	2	2	1	
C412.2	3	3	3	2	1	1	2	1	3	3	1	1	2	2	1	
C412.3	3	3	3	2	-	-	2	1	3	3	1	1	2	2	1	
C412.4	3	3	3	2	-	-	2	1	3	3	1	1	2	2	1	
C412.5	3	3	3	2	-	-	2	1	3	3	1	1	2	2	1	
C412.6	3	3	3	2	1	1	2	-	3	3	1	1	2	2	1	
C412	3	3	3	2	1	1	2	1	3	3	1	1	2	2	1	

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