St Thomas Institute for Science and Technology
Department of Civil Engineering
Course Outcome

Program : B.Tech Civil Engineering
Syllabus : 2019

Semester	S7
Course Name	DESIGN OF STEEL STRUCTURES
Course Code	CET401
Course Outcome	
Sl No	Outcomes
CO1	Explain the behavior and properties of structural steel members to resist various structural forces and actions and apply the relevant codes of practice
CO2	Analyses the behavior of structural steel members and undertake design at both serviceability and ultimate limit states
CO3	Explain the theoretical and practical aspects of Design of composite Steel Structure along with the planning and design aspects
CO4	Apply a diverse knowledge of Design of Steel engineering practices applied to real life problems
CO5	Demonstrate experience in the implementation of design of structures on engineering concepts which are applied in field Structural Engineering

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Program : B.Tech Civil Engineering
Syllabus : 2019

Semester	S7
Course Name	CONSTRUCTION PLANNING AND MANAGEMENT
Course Code	CET453
Course Outcome	
Sl No	Outcomes
CO1	Apply knowledge of Planning and Management for planning and execution of Construction Projects
CO2	Explain techniques for Project Planning, Scheduling, Construction Administration and Management
CO3	Identify the criteria for selecting the appropriate method and tools as per the requirement of each project or site
CO4	Discuss the latest industry standards and technologies used in construction projects for planning and management
CO5	Explain the financial and legal aspects involved in a construction project.

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Semester	S7
Course Name	RENEWABLE ENERGY
Course Code	MET445
Course Outcome	
Sl No	Outcomes
CO1	Explain renewable energy sources and evaluate the implication of renewable energy. To predict solar radiation at a location
CO2	Explain solar energy collectors, storages, solar cell characteristics and applications
CO3	Explain the different types of wind power machines and control strategies of wind turbines
CO4	Explain the ocean energy and conversion devices and different Geothermal sources
CO5	Explain biomass energy conversion devices. Calculate the Net Present value and payback period

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Semester	S7
Course Name	INDUSTRIAL SAFETY ENGINEERING
Course Code	MCN401
Course Outcome	
Sl No	Outcomes
CO1	Describe the theories of accident causation and preventive measures of industrial accidents. (Cognitive Knowledge level: Understand)
CO2	Explain about personal protective equipment, its selection, safety performance & indicators and importance of housekeeping. (Cognitive Knowledge level: Understand)
CO3	Explain different issues in construction industries. (Cognitive Knowledge level: Understand)
CO4	Describe various hazards associated with different machines and mechanical material handling. (Cognitive Knowledge level: Understand)
CO5	Utilise different hazard identification tools in different industries with the knowledge of different types of chemical hazards. (Cognitive Knowledge level: Apply)

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Semester	S7
Course Name	ENVIRONMENTAL ENGINEERING LAB
Course Code	CEL411
Course Outcome	
Sl No	Outcomes
CO1	Analyse various physico-chemical and biological parameters of water
CO2	Compare the quality of water with drinking water standards and recommend its suitability for drinking purposes

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Semester	S7
Course Name	SEMINAR
Course Code	CEQ413
Course Outcome	
Sl No	Outcomes
CO1	1 Identify academic documents from the literature which are related to her/his areas of interest (Cognitive knowledge level: Apply).
CO2	Read and apprehend an academic document from the literature which is related to her/ his areas of interest (Cognitive knowledge level: Analyze)
CO3	Prepare a presentation about an academic document (Cognitive knowledge level: Create).
CO4	Give a presentation about an academic document (Cognitive knowledge level: Apply).
CO5	Prepare a technical report (Cognitive knowledge level:Create).

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Semester	S7
Course Name	PROJECT PHASE I
Course Code	CED415
Course Outcome	
Sl No	Outcomes
CO1	Model and solve real world problems by applying knowledge across domains (Cognitive knowledge level: Apply).
CO2	Develop products, processes or technologies for sustainable and socially relevant applications (Cognitive knowledge level: Apply).
CO3	Function effectively as an individual and as a leader in diverse teams and to comprehend and execute designated tasks (Cognitive knowledge level: Apply).
CO4	Plan and execute tasks utilizing available resources within timelines, following ethical and professional norms (Cognitive knowledge level: Apply).
CO5	Identify technology/research gaps and propose innovative/creative solutions (Cognitive knowledge level: Analyze).
CO6	Organize and communicate technical and scientific findings effectively in written and oral forms (Cognitive knowledge level: Apply).

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Semester	S8
Course Name	QUANTITY SURVEYING AND VALUATION
Course Code	CET402
Course Outcome	
Sl No	Outcomes
CO1	Define basic terms related to estimation, quantity surveying and contract document
CO2	Interpret the item of work from drawings and explain its general specification and unit of measurement
CO3	Make use of given data from CPWD DAR/DSR for calculating the unit rate of different items of work associated with building construction
CO4	Develop detailed measurement (including BBS) and BoQ of a various work like buildings, earthwork for road, sanitary and water supply work
CO5	Explain various basic terms related to valuation of land and building
CO6	Develop valuation of buildings using different methods of valuation.

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Course Outcome

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Semester	S8
Course Name	AIR QUALITY MANAGEMENT
Course Code	CET464
Course Outcome	
Sl No	Outcomes
CO1	Explain the sources of air pollution and different types of air pollutant.
CO2	Describe the effect of air pollutants on vegetation, animals, materials and human health.
CO3	Discuss the different methods of ambient air quality monitoring systems which support an air quality management program.
CO4	Explain the meteorological aspects of air pollutant dispersion.
CO5	Describe the various air pollution control strategies that can be undertaken to meet the air quality goals.

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Course Outcome

Program : B.Tech Civil Engineering
Syllabus : 2019

Semester	S8
Course Name	REPAIR AND REHABILITATION OF BUILDINGS
Course Code	CET456
Course Outcome	
Sl No	Outcomes
CO1	Recall the basics ideas and theories associated with Concrete technology and Masonry structures.
CO2	Understand the need and methodology of repair and rehabilitation of structures, the various mechanisms used, and tools for diagnosis of structures
CO3	Identifying the criterions for repairing / maintenance and the types and properties of repair materials used in site. Learn various techniques for repairing dam- aged and corroded structures
CO4	Proposing wholesum solutions for maintenance/rehabilitation and applying methodologies for repair- ing structures or demolishing structures.
CO5	Analyse and asses the damage to structures using various tests

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Course Outcome

Program : B.Tech Civil Engineering
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Semester	S8
Course Name	SUSTAINABLE CONSTRUCTION
Course Code	CET458
Course Outcome	
Sl No	Outcomes
CO1	Explain the fundamental concepts of sustainability
CO2	Describe the properties and uses of sustainable building materials
CO3	Identify suitable construction techniques and practices for sustainable buildings
CO4	Discuss the standards and guidelines for sustainable buildings
CO5	Comment on the role of BIM and automation in sustainable construction

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Semester	S8
Course Name	COMPREHENSIVE COURSE VIVA
Course Code	CET404
Course Outcome	
Sl No	Outcomes
CO1	Learn to prepare for a competitive examination
CO2	Comprehend the questions in Mechanical Engineering field and answer them with confidence
CO3	Communicate effectively with faculty in scholarly environments
CO4	Analyze the comprehensive knowledge gained in basic courses in the field of Mechanical Engineering

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Program : B.Tech Civil Engineering
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Semester	S8
Course Name	PROJECT PHASE 2
Course Code	CED416
Course Outcome	
Sl No	Outcomes
CO1	Model and solve real world problems by applying knowledge across domains (Cognitive knowledge level: Apply).
CO2	Develop products, processes or technologies for sustainable and socially relevant applications (Cognitive knowledge level: Apply)
CO3	Function effectively as an individual and as a leader in diverse teams and to comprehend and execute designated tasks (Cognitive knowledge level: Apply).
CO4	Plan and execute tasks utilizing available resources within timelines, following ethical and professional norms (Cognitive knowledge level: Apply)
CO5	Identify technology/research gaps and propose innovative/creative solutions (Cognitive knowledge level: Analyze).
CO6	Organize and communicate technical and scientific findings effectively in written and oral forms (Cognitive knowledge level: Apply).