

DEPARTMENT OF CIVIL ENGINEERING
Course Outcomes-2020 Scheme (M.Tech - CCT)

S.No.	Subject Code	Course Code	Course Outcomes
1	20CCT11 Mathematics In Construction Technology	C101.1	Apply the knowledge of direct methods and iterative methods for solving system of linear equations up to required accuracy
		C101.2	Acquire the idea of significant figures, method of approximation of roots of equation.
		C101.3	Understand numerical methods/linear programming techniques to various root finding/for differential and integral equations
		C101.4	Interpret the probability concepts in Civil engineering
		C101.5	Learn the applications of statistical methods for the experiments and civil engineering projects

S.No.	Subject Code	Course Code	Course Outcomes
2	20CCT12 Construction Project and Management	C102.1	Allocate the funds for each work and execute the same.
		C102.2	Calculate the total time required to complete the job without delay and delay in the project and also estimate the amount of additional funds may require to complete the job.

S.No.	Subject Code	Course Code	Course Outcomes
3	20CCT13 Construction Quality and Safety	C103.1	Gain the knowledge, Importance and necessity of quality management in construction
		C103.2	Learn and apply the importance of safety management in construction.

S.No.	Subject Code	Course Code	Course Outcomes
4	20CCT14 Advanced Construction Materials And Green Buildings	C104.1	Solve the problems of environmental issues concerned to building materials and cost effective building technologies
		C104.2	Analyze different alternative building materials, which will be suitable for specific climate and in sustainable manner.
		C104.3	Recommend various types of alternative building materials, technologies and to design an energy efficient building by considering local climatic condition and building materials.
		C104.4	Conduct the various tests on fresh and hardened concrete, special concrete and the methods of manufacturing of concrete
		C104.5	Know the idea of utilizing less carbon emission materials.

S.No.	Subject Code	Course Code	Course Outcomes
5	20CCT15 Mechanization in Construction	C105.1	Understand applications of different types of equipments/machineries used in construction industry
		C105.2	Understand use of modern tools and techniques
		C105.3	Know the methods of drilling and blasting.
		C105.4	Impact of different construction activities on environment

S.No.	Subject Code	Course Code	Course Outcomes
6	20CCTL16 Advanced Material Testing Laboratory	C106.1	Achieve the Knowledge of design and development of experimental skills.
		C106.2	Understand the properties fresh and hardened concrete.
		C106.3	Understand the classification of soil and safe bearing capacity of soil in construction industry

S.No.	Subject Code	Course Code	Course Outcomes
7	20RM17 Research Methodotooy And Ifr.	C107.1	Discuss research methodology and the technique of defining a research problem
		C107.2	Explain the functions of the literature review in research,
		C107.3	Carrying out a literature search, developing theoretical and conceptual frameworks and writing a review
		C107.4	Explain various research designs, sampling designs, measurement and scaling techniques and also different methods of data collections
		C107.5	Explain several parametric tests of hypotheses, Chi-square test, art of interpretation and writing research reports
		C107.1	Discuss various forms of the intellectual property, its relevance and business impact in the changing global business environment and leading International Instruments concerning IPR.

S.No.	Subject Code	Course Code	Course Outcomes
8	20CCT21 Construction Economics and Finance	C108.1	To understand the importance of economics and finance in civil engineering projects
		C108.2	To understand and analyze financial statements.
		C108.3	To assess profit, loss and break-even point
		C108.4	To develop a budget, manage and regulate it.
		C108.5	To analyze different risks and uncertainties.

S.No.	Subject Code	Course Code	Course Outcomes
9	20CCT22 Pre- Engineered Construction Technology	C109.1	To design the pre-engineered structures and execute the same for a given structure.
		C109.2	To know the different types of stresses acting on the structures while lifting the prefabricated structures and type of equipment required to support such stresses

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10	20CCT23 Design	C110.1	Understand the importance of soil exploration; determine the Bearing capacity of the soil in

	Concepts of Sub-Structures		various field conditions.
		C110.2	Design the shallow foundations and raft foundation
		C110.3	Understand and solve the problems associated with pile foundations.
		C110.4	Understand importance of geo-synthetics as soil reinforcement

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11	20CCT241 Building Services and Maintenance	C111.1	Manage the building services provisions in big construction sites requisite budget
		C111.2	. Synchronize the construction activities with installation of building services
		C111.3	Select the suitable electrical as well mechanical services for particular requirements of buildings
		C111.4	Select the appropriate type of maintenance depending upon necessity and requisite budget.

S.No.	Subject Code	Course Code	Course Outcomes
12	20CCT252 Pavement Design and Construction	C112.1	Explain the various factors affecting design and performance of pavements
		C112.2	Calculate the stresses and deflection in flexible and rigid pavements.
		C112.3	Select suitable equipment for preparation of sub grade and preparation stages for base and sub base layers.
		C112.4	Design the thickness of flexible pavements by different methods under different exposure conditions and materials.
		C112.5	Design the thickness of concrete pavements and joints associated with CC pavements in addition to the computation of stresses in CC pavements.

S.No.	Subject Code	Course Code	Course Outcomes
13	20CCTL26 Software Application Laboratory	C113.1	Achieve Knowledge of Design and development of soft skills.
		C113.2	Understand the application of planning and scheduling techniques to construction project
		C113.3	Optimize time and cost for the construction project

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14	20CCT27 Technical Seminar	C114.1	Develop knowledge in the field of Civil Engineering and other disciplines through independent learning and collaborative study.
		C114.2	Identify and discuss the current, real-time issues and challenges in engineering & technology.
		C114.3	Develop written and oral communication skills. Apply principles of ethics and respect in interaction with others
		C114.4	Explore concepts in larger diverse social and academic contexts.
		C114.5	Develop the skills to enable life-long learning.

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15	20CCT31 Construction Contracts, Specifications and Estimation	C201.1	Attain the knowledge on estimates, Develop and present rate analysis and specifications.
		C201.2	Develop and present the tender documents for the project
		C201.3	Attain the knowledge on tendering procedure, claims and dispute mechanisms.
		C201.4	Attain the knowledge on BOT, PPP, Concession contracts.
		C201.5	Attain the knowledge on laws affecting engineers, relational contracts.

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16	20CCT321 Restoration and Rehabilitation of Structures	C202.1	Predict the failure modes in structures.
		C202.2	Design the structures to overcome the failure in construction activities
		C202.3	. Understand the deterioration of structures.
		C202.4	Suggest remedial measures for different types of failures.
		C202.5	Understand different methods of demolition.

S.No.	Subject Code	Course Code	Course Outcomes
17	20CCT331 Energy And Buildings	C203.1	Understand the importance of energy resources
		C203.2	Design energy efficient buildings

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18	20CCT34 Project phase I	C204.1	Present the project and be able to defend it
		C204.2	Make links across different areas of knowledge and to generate, develop and evaluate ideas and information so as to apply these skills to the project task

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19	20CCT35 Mini Project	C205.1	Present the mini-project and be able to defend it.
		C205.2	Make links across different areas of knowledge and to generate, develop and evaluate ideas and information so as to apply these skills to the project task.
		C205.3	Habituated to critical thinking and use problem solving skills.
		C205.4	Communicate effectively and to present ideas clearly and coherently in both the written and oral forms
		C205.5	Work in a team to achieve common goal.
		C205.6	Learn on their own, reflect on their learning and take appropriate actions to improve it.
		C205.7	Learn on their own, reflect on their learning and take appropriate actions to improve it.

S.No.	Subject Code	Course Code	Course Outcomes
20	20CCT41 PROJECT WORK PHASE -2	C206.1	Present the project and be able to defend it
		C206.2	Make links across different areas of knowledge and to generate, develop and evaluate ideas and information so as to apply these skills to the project task
		C206.3	Habituated to critical thinking and use problem solving skills
		C206.4	Communicate effectively and to present ideas clearly and coherently in both the written and oral forms.