COMPUTER AIDED BUILDING DRAWING

Course Code: CE28004
Credit: 1
L-T-P: 0-0-2
Prerequisite: Engineering Drawing & Graphics (CE18001)

COURSE OBJECTIVE

The objective of this course is to enable the students to draft various components of a building (fundamentals of plan and section of building, finalizing the scales, beams, columns, etc.) using AutoCAD software.

COURSE OUTCOMES

After successfully completing the course, the students will be able to

CO1: Explain the basics of AutoCAD software required for building drawing,

CO2: Comprehend the various components of building,

CO2: Design and draft the plan and elevation of a building using AutoCAD,

CO3: Develop and design the sectional views of a building using AutoCAD,

CO4: Design and draft the plan and sectional views of foundation and columns using AutoCAD,

CO5: Design and draft the plan and sectional details of plinth and lintel beam using AutoCAD, and

CO6: Develop and design the plan and sectional view of a staircase using AutoCAD

COURSE DETAILS

- Introduction to AutoCAD
- Practice of various AutoCAD commands using simple drawings
- Concepts on Load bearing and RCC frame structures, plans, and section
- Overview on various components of a building like approximate size of rooms, doors, windows, wall thickness, tread, and riser of staircase, etc.
- Architectural Plan of a single and double storied building
- Elevation of a single and double storied building
- Sectional view of a building
- Plan and sectional drawing of foundation
- Plan and sectional drawing of column
- Plan and sectional drawing of different beams
- Plan and sectional drawing of staircase

Textbooks

    1. Civil Engineering Drawing by M Chakraborty, Oxford University Press, 2012

    2. Civil Engineering Drawing by S. C. Rangwala, 2nd edition, 1991.

Reference book

    1. Manual for Building Drawing prepared by School of Civil Engineering, KIIT DU.

GIS & GPS APPLICATIONS

Course Code: CE28003
Credit: 1
L-T-P: 0-0-2
Prerequisite: Nil

COURSE OBJECTIVE

The objective of the course is to understand the GIS principles, applications, preparation of study maps, creation of interpolation maps, delineation of watershed, explain the functions of GPS and operation of GPS.

COURSE OUTCOMES

After successfully completing the course, the students will be able to

CO 1: Explain the fundamentals of GIS,
CO 2: Comprehend the operations of ArcGIS tools and prepare the layout of study area,
CO 3: Create interpolation maps,
CO 4: Delineate watershed using ArcGIS,
CO 5: Describe the principles and functions of GPS, and
CO 6: Operate GPS in the field for navigation.

COURSE DETAILS

- Overview of Geographic Information System (GIS)
- Familiarization to ArcGIS Interface
- Layout of study area
- Preparation of interpolation map
- Watershed delineation
- Remote sensing satellites
- Basics of Global position system
- Basic operations of GPS Handset
- GPS field surveying and data processing

Reference Books

1. Principles of geographical information systems by P.A. Burrough and R. A. McDonnell, Oxford University Press, UK.
2. Geographic information systems and science by M.F. Goodchild, P.A. Longley, D.J. Maguire and D.W. Rhind, John Wiley & Sons Ltd., England.
3. Global Positioning system: Principles and Applications by Satheesh Gopi, McGraw Hill Education.

PROJECT PLANNING AND SCHEDULING USING PRIMAVERA-P-6

Course Code: CE28006
Credit: 1
L-T-P: 0-0-2
Prerequisite: Nil

COURSE OBJECTIVE

This course aims at imparting basics of project management and practical application of scheduling using Primavera P6. Students will be able to understand project management tools like planning, monitoring and control and learn the practical application of primavera software in real projects.

COURSE OUTCOMES

After successfully completing the course, the students will be able to

CO 1: Recognize the tools used to manage projects,
CO 2: Apply the concepts for time management of the project,
CO 3: Perform optimization of project time and cost,
CO 4: Perform the optimization of resources used in the projects,
CO 5: Apply knowledge of various domains of the project to address specific management needs, and
CO 6: Comprehend the various concepts of Earn Value Management.

COURSE DETAILS

Topic
- Introduction to Basic of Project Management
- Introduction to planning & Scheduling & Primavera software
- Installation of Primavera software
- Comprehend CPM, relationship, Lead & lag
- Define EPS & OBS
- Create & Assign calendar
- Create WBS, Activity & Create Schedule
- Define Resources & Assign Resources
- Resource Levelling & Smoothing
- Create Baseline
- Tracking; Update Progress
- Earned Value Analysis/Budget Estimation, Reporting
- Develop Real Project Level 5 Schedule as done in the industry

Textbooks

1. A Guide to The Project Management Body of Knowledge (Pmbok® Guide), Project Management Institute, 7th Edition, 2021, ISBN 9781628256642.
2. U.K. Shrivastav, Construction Planning and Management, Galgotia Publications Pvt. Ltd, 3rd Edition, 2005, Reprint 2015, ISBN-978-81-7515-246-5.