(038-CMC-03-02) CIVIL ENGINEERING WITH AI AND GEOINFORMATICS

Significance of the Program

Imagine a world where construction projects are executed with maximum efficiency and precision, using the most advanced technology available. A world where geospatial data and artificial intelligence are integrated seamlessly into civil engineering projects, leading to better outcomes and reduced costs. This world is not a distant dream but a rapidly approaching reality, and it all begins with a BTech Civil Engineering (AI & Geoinformatics) degree.

Scope:

BTech Civil Engineering (AI & Geoinformatics) is an interdisciplinary program that combines the principles of civil engineering, computer science, and geoinformatics. The program prepares students to develop and apply AI and geospatial technologies in civil engineering projects.

Career Options

- Pursuing a professional course in Civil Engineering with Artificial Intelligence & Geoinformatics, students can explore the following opportunities:
- They can work as Surveyor for tunnelling, road networks.
- They can work as GIS and remote sensing technology lead, Remote Sensing & GIS Software Analyst, Remote Sensing & GIS Technical Program Manager
- They can work in Government sectors such as Central Ground Water Board, National Bureau of Soil Survey and Land use planning Town and Country Planning.
- They can work as Engineer in smart construction projects in smart city development and 3D printing technology
- They can also work as software developer for analysis and design of Civil infrastructures, AI Engineers

Program Objectives

- To prepare the graduate ready for latest trend in Civil engineering field
- To prepare the Civil Engineers to acquire IT skills to compete in the market with diversified application of AI
- To develop computer skills that are required for fast growing smart civil infrastructure

Outcomes of the Program

- To prepare for working in an interdisciplinary environment with advanced technologies to solve complex transportation problems
- To impart comprehensive knowledge of geoinformation in the field of water resource engineering to meet current and future challenges.

Major Course Outline

- GIS for Transportation Engineering, Geoinformatics for Environmental Monitoring, Geoinformatics for Watershed Management, Drone and UAV Remote sensing
- Artificial Intelligence for structural optimization, Ground water prediction, weather prediction. Transportation engineering with AI applications, intelligent transportation systems, Transportation Data Analysis
- Structural Engineering with computer application
- Building planning and drawing with Computer applications