COURSE TITLE       : COMPUTER APPLICATION LAB
COURSE CODE      : 5019
COURSE CATEGORY : P
PERIODS/WEEK    : 6
PERIODS/SEMESTER: 78
CREDITS          : 3

**TIME SCHEDULE**

| Module | Topics | Period |
|--------|--------|--------|
| 1 | MS project | 21 |
| 2 | Design package | 24 |
| 3 | Concrete mix design package<br>Electronic spread sheet | 15 |
| 4 | Estimator package | 18 |
| **TOTAL** | | **78** |

**COURSE OUTCOME**

| Sl. | Sub | Student will be able to |
|-----|-----|-------------------------|
| **1** | 1 | Identify the task and their duration |
| | 2 | Estimate the time required for completing the project using management software |
| | 3 | Carryout the analysis and design of structures and report the details using a design software |
| **2** | 1 | Design the concrete mix for a given strength and workability using any available concrete mix design package |
| | 2 | Tabulate the observations and obtain the relevant calculations and graph using the data from the civil engineering laboratories. |
| | 3 | Prepare estimate of buildings using estimation package |

**SPECIFIC OUTCOME**

Upon completion of the study, the student should be able to:

**1.1.0   Using Project Management software**
   1.1.1 Identifying task & their duration
   1.1.2 Assigning resources – Linking tasks
   1.1.3 Estimating time required for completing the project
   1.1.4 Identifying the critical path

**2.1.0    Using Design Packages**

         2.1.1 Perform analysis and design of structures and report the details using any available structural analysis and design application software (at least one package)

         2.1.2 Design the concrete mix for a given strength and workability using any available Concrete mix design package

**3.1.0    Surveying & GIS**

         3.1.1 Solve the problems of surveying using any available surveying and GIS application packages (at least one package)

         3.1.2 Digitize the given map and connect the attribute data to the map using any available application software

**4.1.0    Estimating of buildings using Estimator packages**

         4.1.1 Perform detailed quantity calculation, rate analysis, and abstract of cost using Available packages.

## <u>CONTENT DETAILS</u>

Using Project Management software - Identifying task & their duration - Assigning resources – Linking tasks - Estimating time required for completing the project -Identifying the critical path

Using Design Packages - Carryout the analysis and design of structures and report the details using any available structural analysis and design application software (at least one package).

Design the concrete mix- For a given strength and workability using any available Concrete mix design package

Surveying & GIS- Solve the problems of surveying using any available surveying and GIS application packages (at least one package) - Digitize the given map and connect the attribute data to the map using any available application software

Estimating of buildings using Estimator packages - Preparation of detailed quantity calculation, rate analysis, abstract of cost using available packages

### <u>REFERENCES:</u>

1. NITTTR, Chennai   : GIS-AICTE continuing Education Module on "Geographical information systems"
2. Teach yourself Microsoft Project