



COMPUTER LAB

Courses Covered:

1. COM-121-L-Introduction to Computer Programming
2. CET-325-L-Computer Aided Building Modeling and Design

**DEPARTMENT OF CIVIL ENGINEERING
TECHNOLOGY
PUNJAB TIANJIN UNIVERSITY OF TECHNOLOGY,
LAHORE**

Course Title: COM-121-L-Introduction to Computer Programing

List of Experiments:

- Introduction to Microsoft Excel for Basic Features.
- Mathematical Operations.
- Application of Microsoft Excel for Advance Features:
- Graphical Representation.
- Weight of hollow steel pipes.
- Volume of a staircase.
- Application of Microsoft Excel for Advance Features:
- Formulae.
- Macros.
- Solver.
- Application of Microsoft Excel for Civil Technologists:
- Moment of Inertia and Radius of Gyration.
- SF and BM Values.

PSEUDOCODE AND FLOWCHART

- Introduction to Pseudocode and Drawing Flowcharts on 3 example problems in various domains of civil technology.

C++/ PYTHON PROGRAMMING

- Finding reactive forces for a beam having UDL throughout its length.
- Calculating Reactive forces having Point load for all three beams:
- Simply supported beam.
- Cantilever beams.
- Overhanging beam.
- Refer to Labs 7 and 8 and convert C++/ Python programming.
- Programming Using Conditional statements.
- Programming Using for Loop and While loop.

MS ACCESS

- Overview of MS Access with its Key Functions.
- How to Create a Database?
- Developing a Sample database and querying results.

List of Equipment's:

Number of Computers Available = 50 (One workstation is available per student).