TRAFFIC ENGINEERING LABORATORY

Department of Transportation Engineering and Management

University of Engineering and Technology, Lahore
**Introduction:**

The traffic engineering lab is designed to supplement the average junior-level course in transportation engineering. Laboratory exercises are meant for most of the major topics addressed in undergraduate transportation engineering program. The lab includes a vast collection of equipments, to assist students in completing the laboratory exercises, and to increase their understanding of these important topics.

**Laboratory staff:**

- Engr. Farhan Haider  Director/ Assistant professor
- Ibtasam Bashir       Lab incharge
- Muhammad Nazir       Lab. Assistant

**List of Equipment:**

1. Traffic signal controller
2. Traffic signal light
3. Traffic cones
4. Traffic safety vests
5. Television, CD, LG
6. Measuring wheel
List of experiments

1. Traffic Counting/Measuring Methods:
   a. Manual Classified Counts (MMC)
      i. Tally Sheets
      ii. Mechanical Counting Boards/Meters
      iii. Electronic Counting Boards/Meters
   b. Automatic Counters
      i. Portable Counters
      ii. Permanent Counters

2. Traffic Signal Timing Design:
   a. Traffic Signal Warrants
   b. Cone of Vision Study
   c. Cycle Length Determination
   d. Timing Adjustments
   e. Signal Coordination
   f. Capacity of Saturation Flow Rate
   g. Inter Green Time
   h. Pedestrian Green Time and Minimum Green Interval
   i. Peak Hour Volume, Design Flow Rate and Peak Hour Factor
   j. Computing Delays and Level of Service (LOS)

3. Accident Analysis:
   a. Formation of Standard Traffic Accident Report Form
   b. Collision Diagrams
   c. Police Traffic Accident Report

4. Intersection Study
   a. Intersection Volume Study
   b. Intersection Geometry Study
c. Sight Distance Study at Intersection
d. Signal Timing Diagram
e. Vehicle Arrival Patterns at Intersection
f. Saturation Flow Rate Measurement

5. Parking Design Study and Pedestrian Study
6. Delay Measurement at a Traffic Intersection
8. Traffic Analysis Software
   b. Synchro and Sim Traffic Simulation
   c. Vissum