

# Traffic Engineering

1. **Course number and name:** 020TRAGS3 Traffic Engineering
2. **Credits and contact hours:** 2 ECTS credits, 1x1.25 hours
3. **Name(s) of instructor(s) or course coordinator(s):** Farah HOMSI
4. **Instructional Materials:**
  - a. A Policy on Geometric Design of Highways and Streets; AASHTO, 6th Edition, 2011.
  - b. Highway Capacity Manual, 2000.
5. **Specific course information**
  - a. **Catalog description:** To provide the tools and methodology to collect and analyze traffic flows and its impact on road networks and to perform capacity analysis for various highway and roadway elements depending on its function. Learn how to collect traffic data and perform demand/capacity analysis. Compare various modes of transport including public transport and its economic and environmental impacts.
  - b. **Prerequisites or co-requisites:** None
  - c. **Required:** Required for Public Works and Transportation Specialty students.
6. **Educational objectives for the course**
  - a. **Specific outcomes of instruction:**
    - To understand traffic flows, classifications and characteristics
    - To be able to relate traffic flows to infrastructure capacity and determine Level of Service (LOS)
    - To evaluate various modes of transportation and its impact on economy and the environment
    - To become aware of various software used in traffic engineering
    - To experience traffic data collection by performing field data collection
    - To learn of traffic calming & safety measures in construction zones and urban streets
  - b. **PI addressed by the course:**

<b>PI</b>	1.1	1.4	2.3	3.1
<b>Covered</b>	yes	yes	yes	yes
<b>Assessed</b>				

**7. Brief list of topics to be covered:**

Chapter #	Title	Nb of sessions
0	Introduction	0
1	Highway Functions	4
2	Basic Freeway Sections	3
3	Weaving Sections	4
4	Ramps and Ramp Junctions	3
Total		14