Course Objectives

1. To cover the principles and methods of traffic engineering.
2. To highlight traffic safety measures and environmental factors.
3. To describe intelligent transportation systems (ITS) as these relate to traffic engineering.
4. To introduce traffic software that are currently in use or under development.
Course Objectives (Continued)

It is expected that this course will bring into focus both concepts and methods that contribute to the safe, efficient and environmentally sustainable movement of road traffic.

September 2016
CIVE5305 Traffic Engineering
Hours/Week: Lecture 3 Hours

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to transportation systems, traffic engineering, emerging issues and trends in traffic engineering, environmental factors, Intelligent Transportation Systems (ITS), sustainable transportation.</td>
</tr>
<tr>
<td>2,3</td>
<td>Traffic stream components and characteristics: basic characteristics of drivers, and traffic. Queuing of traffic. Geometric characteristics of roadways. Traffic control devices. Traffic streams.</td>
</tr>
</tbody>
</table>

Fall 2016
CIVE5305 Traffic Engineering
Hours/Week: Lectures 3 Hours

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>4,5</td>
<td>Traffic studies: introduction and overview. Statistics and applications in traffic engineering; volume, speed, travel time and delay; parking</td>
</tr>
<tr>
<td>6</td>
<td>Accident studies.</td>
</tr>
<tr>
<td>7</td>
<td>Capacity analysis of roads and intersections.</td>
</tr>
<tr>
<td>12</td>
<td>Traffic simulation.</td>
</tr>
</tbody>
</table>

TEXT BOOKS & REFERENCES (Subject to change)


TEXT BOOKS & REFERENCES (Cont.)
TEXT BOOKS & REFERENCES (Cont.)


Web-based Course on Fundamentals of ITS and Traffic Management
(http://www.citeconsortium.org/WebCT/priv/linx2class.htm)

IMPORTANT SOURCES OF INFORMATION (subject to change)

Institute of Transportation Engineers (www.ITE.ORG).

Transportation Research Board (TRB) (http://nas.edu/trb) [Use TRIS-on line for Transportation Research Information Service for literature search].
IMPORTANT SOURCES OF INFORMATION

(Cont.)

Intelligent Transportation Systems Society of Canada (ITS Canada) (www.ITSCANADA.ca)

ITS America (http://www.itsa.org/)

Transportation Association of Canada (TAC)

(www.tac-atc.ca)

MARKING SCHEME

Assignments 30%

Term Paper (Research Paper) 30%

Final Examination 40%
Announcements

Academic Accommodation
You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

- **Pregnancy obligation:** write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: http://carleton.ca/equity/accommodation/student_guide.htm
• Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: http://carleton.ca/equity/accommodation/student_guide.htm
Academic Accommodation

“The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation.”
Announcements

Academic Accommodation

“If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). Requests made within two weeks will be reviewed on a case-by-case basis. After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website (www.carleton.ca PMC) for the deadline to request accommodations for the formally-scheduled exam (if applicable). “