Bachelor of Technology Partnership

Course Outline

1. COURSE INFORMATION

Session Offered	Winter 2014	
Course Name	Transportation Planning and Modelling	
Course Code	CIV TECH 3TP3	
Program Name	Bachelor of Technology	
Calendar Description	Fundamental theories and applications of transportation planning and modeling; short and long range transportation planning; traffic impacts of land development; trip generation and trip distribution models; software applications; intersection analysis.	
Instructor	Dan Havercroft	E-Mail: havercr@mcmaster.ca

2. COURSE SPECIFICS

Course Description

Instruction Type

Code	Type	Total Hours
C	Classroom Instruction	**42**
L	Laboratory, workshop or fieldwork	
T	Tutorial	
DE	Distance Education	
	TOTAL HOURS	**42**

Resources

ISBN	Textbook Title & Edition	Author & Publisher
0-471-17396-7	"Transportation Engineering" 4th Ed.	Wright & Ashford – Wiley Publishing
10 0-495-08250-3	"Traffic and Highway Engineering" 4th Ed.	Garber and Hoel - West Publishing
0-07-243188-1	"Introduction to Transportation Engineering" 2nd Ed.	Banks – McGraw Hill Publishing.
Other Supplies		

Prerequisite(s)	None
Corequisite(s)	None
Antirequisite(s)	None
Course Specific Policies	• All work submitted by the student becomes the property of the Mohawk College and/or McMaster University. • All assignments are due "as is" on the due date, and are not acceptable after this date. Students who miss a due date for an assignment or miss a test for a valid reason must take documentation to their respective faculty office. Valid reasons include, but are not limited to, illness, death of a family member or religious holidays. Once documentation has been accepted by the Faculty Office and forwarded to the instructor, it is the student's responsibility to contact the instructor to make the necessary arrangements for making up the work.
Departmental Policies	Students must maintain a 3.5/12 GPA to continue in the program.

	In order to achieve the required learning objectives, on average, B.Tech. students can expect to do at least 3 hours of "out-of-class" work for every scheduled hour in class. "Out-of-class" work includes reading, research, assignments and preparation for tests and examinations. Where group work is indicated in the course outline, such collaborative work is mandatory. The use of cell phones, iPods, laptops and other personal electronic devices are prohibited from the classroom during the class time, unless the instructor makes an explicit exception. Announcements made in class or placed on Avenue are considered to have been communicated to all students including those individuals that are not in class. Instructor has the right to submit work to software to identify plagiarism.	
3. SUB TOPIC(S)		
Week 1	1. Introduction to Transportation Planning 2. Short Range Transportation Planning (SRTP)	
Week 2	1. Land use zoning; zoning by-laws; Ontario Municipal Board (OMB). 2. Transportation Specialist involved in land development	
Week 3	1. Traffic Impact Analysis (TIA) 2. Apply the SRTP process to small scale proposed residential developments	
Week 4	1. Apply the SRTP process to proposed shopping centre developments. 2. Identify problems and recommend solutions for various given commercial developments.	
Week 5	1. Test: 1.5 hours 2. Roundtable discussion on traffic engineering.	
Week 6	1. Sustainable Transportation Through Site Design	
Week 7	1. Traffic Control Signals 2. Saturation Flow and Intersection Capacity	
Week 8	1. Evaluation Criteria for Signalized Intersections 2. Signal Timing and Intersection Design	
Week 9	1. Highway Capacity Software Lab E203 Mohawk College	
Week 10	1. Test: 1.5 hours 2. Roundtable discussion on transportation planning.	
Week 11	1. Transportation Modeling - Network Planning 2. The Land Use Transportation Model 3. Transportation System Management (TSM)	
Week 12	1. Trip Generation 2. Trip Distribution 3. Modal Split	
Week 13	1. Trip Assignment 2. Travel Demand Model – Emme3 3. Trip Assignment – Calculations	
Classes End – Tuesday, April 8, 2014 Final Examination Period: Thursday April 10, 2014 to Tuesday April 29, 2014 All examinations MUST BE written during the scheduled examination period.		
Note: this structure represents a plan and is subject to adjustment term by term. The instructor and the		

university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes.

4. ASSESSMENT OF LEARNING	Weight
Assignments	**40**
Test #1	**15**
Test #2	**15**
Final Exam	**30**
TOTAL	**100%**

Percentage grades will be converted to letter grades and grade points per the University calendar.

5. LEARNING OUTCOMES

1. Summarize the technical and legislated procedures in the transportation planning process
2. Produce estimates of traffic impact of land development projects
3. Appraise elements of site design
4. Appraise Trip Generation, Trip Distribution, Modal Split and Trip Assignment calculations.
5. Identify Traffic System Management Strategies.
6. Identify basic traffic signal control strategies.
7. Appraise basic traffic signal control timing plans.

6. POLICIES

Anti-Discrimination

The Faculty of Engineering is concerned with ensuring an environment that is free of all discrimination. If there is a problem, individuals are reminded that they should contact the Department Chair, the Sexual Harassment Officer or the Human Rights Consultant, as soon as possible.
http://www.mcmaster.ca/policy/General/HR/Anti-Discrimination%20policy.pdf

Academic Integrity

Attention is drawn to the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty as found in the Senate Policy Statements distributed at registration and available in the Senate Office. Any student who infringes one of these resolutions will be treated according to the published policy.

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at: http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf

Requests for Relief for Missed Academic Term Work (Assignments, Mid-Terms, etc.)

The McMaster Student Absence Form is a self reporting tool for **Undergraduate Students** to report absences that last up to 5 days and provides the ability to request accommodation for any missed academic work. Please note, this tool cannot be used during any final examination period.
You may submit a maximum of 1 Academic Work Missed requests per term. It is YOUR responsibility to follow up with your Instructor immediately regarding the nature of the accommodation.
If you are absent more than 5 days or exceed 1 request per term you MUST visit your Associate Dean's Office (Faculty Office). You may be required to provide supporting documentation.
This form should be filled out immediately when you are about to return to class after your absence.
http://www.mcmaster.ca/msaf/

E-Learning Policy

Consistent with the Bachelor of Technology’s policy to utilize e-learning as a complement to traditional classroom instruction, students are expected to obtain appropriate passwords and accounts to access

Avenue To Learn for this course. Materials will be posted by class for student download. It is expected that students will avail themselves of these materials prior to class. Avenue can be accessed via http://avenue.mcmaster.ca

Communications

It is the student's responsibility to:

- Maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- Use the university provided e-mail address or maintain a valid forwarding e-mail address.
- Regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- Accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.
- To check their McMaster/Avenue email and course websites on a regular basis during the term.

Turnitin (Optional)

This course will be using a web-based service (Turnitin.com) to reveal plagiarism. Students will be expected to submit their work electronically to Turnitin.com and in hard copy so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to www.mcmaster.ca/academicintegrity

Protection of Privacy Act (FIPPA)

The Freedom of Privacy of Information and Protection of Privacy Act (FIPPA) applies to universities. Instructors should take care to protect student names, student numbers, grades and all other personal information at all times. For example, the submission and return of assignments and posting of grades must be done in a manner that ensures confidentiality.
http://www.mcmaster.ca/univsec/fippa/fippa.cfm

Academic Accommodation of Students with Disabilities Policy

Student Accessibility Services (SAS) is committed to the continuous improvement of accessibility for students with disabilities. Students are encouraged to contact SAS as early as possible before each term starts to become familiar with the services offered and to confirm their accommodations.

Students must forward a copy of the SAS accommodation to the instructor of each course and to the Program Administrator of the B.Tech. Program immediately upon receipt. If a student with a disability chooses NOT to take advantage of a SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. http://sas.mcmaster.ca

Student Code of Conduct

The Student Code of Conduct (SCC) exists to promote the safety and security of all the students in the McMaster community and to encourage respect for others, their property and the laws of the land. McMaster University is a community which values mutual respect for the rights, responsibilities, dignity and well-being of others. The purpose of the Student Code of Conduct is to outline accepted standards of behavior that are harmonious with the goals and the well-being of the University community, and to define the procedures to be followed when students fail to meet the accepted standards of behavior. All students have the responsibility to familiarize themselves with the University regulations and the conduct expected of them while studying at McMaster University.
http://judicialaffairs.mcmaster.ca/pdf/SCC.pdf