

{think} {innovate} {lead}



CEE 4624: Planning of Transportation Facilities

MWF – 11:15 AM - 12:05 PM, Online Synchronous

<https://virginiatech.zoom.us/j/94109913835?pwd=T0tlSU4wV0ZXeGFoNURpV2Z5RnpuQT09>

Catalog Description

Transportation planning process; urban and regional studies, surveys, data analysis, model development and testing; transportation management, administration, finance, system evaluation, implementation, and integration.

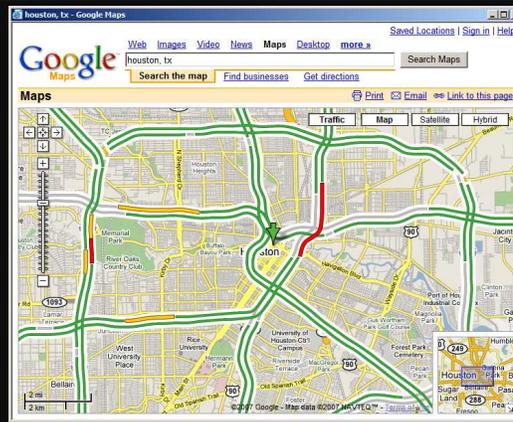
Course Objectives

1. Gain a complete understanding of the four-step Travel Demand Forecasting (TDF) process
2. Recognize how TDF is used to support planning activities
3. Analyze and perform the modeling strategies utilized to carry on the TDF process
4. Learn and use a computer software package that demonstrates the workings of the TDF process
5. Understand the Transportation Evaluation Process (TEP)
6. Carry on the transportation impact estimation methodologies
7. Learn and comprehend the role of Intelligent Transportation Systems in providing solutions to transportation problems



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(12362 from campus)
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Office Hours: By Appointment

- Domencich, T. and D.L. McFadden (1975). Urban Travel Demand: A Behavioral Analysis. available from <http://www.econ.berkeley.edu/~mcfadden/travel.html> (Links to an external site.)Links to an external site.
- Ortuzar and Willumsen. Modeling Transport. (Most recent version available as an e-book from VT library).
- Virginia Transportation Modeling: Travel Demand Modeling Policies and Procedures. http://www.virginiadot.org/projects/resources/vtm/VTM_Policy_Manual.pdf
- NCHRP Report 365. <http://ntl.bts.gov/lib/21000/21500/21563/PB99126724.pdf>
- TRB Travel Survey Manual: <http://www.travelsurveymanual.org/>
- Sheppard, E. (1995). Modeling and Predicting Aggregate Flows. In The Geography of Urban Transportation. S. Hanson (ed.), 2nd Edition, New York: Guilford Press, pp. 100-128.
- Barber, G. (1995). Aggregate Characteristics of Urban Travel. In The Geography of Urban Transportation. S. Hanson (ed.), 2nd Edition, New York: Guilford Press, pp. 81-99.
- Pas, E.I. (1995). The Urban Transportation Planning Process. In The Geography of Urban Transportation. S. Hanson (ed.), 2nd Edition, New York: Guilford Press, pp. 53-77.
- Deakin, E. (1988). Traffic Jams on Main Street, Civil Engineering, April, pp. 45-47.

Handouts/Software: The handouts and software used in this course are copyrighted. Handouts shall not be copied unless the instructor expressly grants permission. Under no circumstances shall software be copied or used outside class requirements or for personal activities.

DISABILITY STATEMENT:

Virginia Tech welcomes students with disabilities into the University's educational programs. The University promotes efforts to provide equal access and a culture of inclusion without altering the essential elements of coursework. If you anticipate or experience academic barriers that may be due to disability, including but not limited to ADHD, chronic or temporary medical conditions, deaf or hard of hearing, learning disability, mental health, or vision impairment, please contact the Services for Students with Disabilities (SSD) office (540-231-3788, ssd@vt.edu, or visit www.ssd.vt.edu). If you have an SSD accommodation letter, please meet with me privately during office hours as early in the semester as possible to deliver your letter and discuss your accommodations. You must give me reasonable notice to implement your accommodations, which is generally 5 business days and 10 business days for final exams.

COVID-19 Statement:

Due to the global pandemic, there are likely to be disruptions to the university, internet, personal life, health, and family during this semester. It is important to keep prospective of the events around us as we learn. Hopefully this class will be an opportunity to take your experiences and use them to think about how we can make a world that is better for people. If events in your life spill over to your ability to complete the work needed to be successful during this semester, please contact me as soon as possible. Early intervention can make difficult situations more manageable.



2016 Toll Rates	
Passenger Vehicles (Two axle vehicles, including motorcycles)	
Monday - Friday	\$3.75 (Peak) / \$3.00 (Off-Peak)
12:00 a.m. to 5:00 a.m.	\$1.25
5:00 a.m. to 9:00 a.m. (PEAK)	\$1.50
9:00 a.m. to 2:30 p.m.	\$1.25
2:30 p.m. to 7:00 p.m. (PEAK)	\$1.50
7:00 p.m. to 12:00 a.m.	\$1.25
Heavy Vehicles (Three axle vehicles, including trucks with trailers)	
Monday - Friday	\$15.00 (Peak) / \$12.50 (Off-Peak)
12:00 a.m. to 5:00 a.m.	\$3.75
5:00 a.m. to 9:00 a.m. (PEAK)	\$6.00
9:00 a.m. to 2:30 p.m.	\$3.75
2:30 p.m. to 7:00 p.m. (PEAK)	\$6.00
7:00 p.m. to 12:00 a.m.	\$3.75

Off-peak rates apply on weekends and holidays.
*Required to be paid for by the user unless the vehicle is a 2015 or newer.
**Completed in their peak pay for Peak rates include a \$1.50 processing fee.



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Academic Policies

The Undergraduate Honor Code pledge that each member of the university community agrees to abide by states: “**As a Hokie, I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do.**”

Students enrolled in this course are responsible for abiding by the Honor Code. A student who has doubts about how the Honor Code applies to any assignment is responsible for obtaining specific guidance from the course instructor before submitting the assignment for evaluation. Ignorance of the rules does not exclude any member of the University community from the requirements and expectations of the Honor Code.

The student must include the following Honor Code Statement on all course assignments (homework, quizzes, papers, exams, reports, etc.) must include the Honor Code Statement: “**I have neither given nor received unauthorized assistance on this assignment.**”

All assignments submitted shall be considered "graded work" and all aspects of your coursework are covered by the Honor Code. All projects and homework assignments are to be completed individually unless otherwise specified. Honor code violations include the following:

A. CHEATING - Cheating includes the intentional use of unauthorized materials, information, notes, study aids or other devices or materials in any academic exercise, or attempts thereof.

B. PLAGIARISM - Plagiarism includes the copying of the language, structure, programming, computer code, ideas, and/or thoughts of another and passing off the same as one's own original work, or attempts thereof.

C. FALSIFICATION - Falsification includes the statement of any untruth, either verbally or in writing, with respect to any element of one's academic work, or attempts thereof.

D. FABRICATION - Fabrication includes making up data and results, and recording or reporting them, or submitting fabricated documents, or attempts thereof.

E. MULTIPLE SUBMISSION - Multiple submission involves the submission for credit—without authorization of the instructor receiving the work—of substantial portions of any work (including oral reports) previously submitted for credit at any academic institution, or attempts thereof.

F. COMPLICITY - Complicity includes intentionally helping another to engage in an act of academic misconduct, or attempts thereof.

G. VIOLATION OF UNIVERSITY, COLLEGE, DEPARTMENTAL, PROGRAM, COURSE, OR FACULTY RULES - The violation of any University, College, Departmental, Program, Course, or Faculty Rules relating to academic matters that may lead to an unfair academic advantage by the student violating the rule(s).

- (1) Suspected violations of the Honor Code will be immediately referred to the Undergraduate Honor System for adjudication. Honor Code website: <http://www.honorsystem.vt.edu/>
- (2) The ethics you are required to maintain in this academic setting are virtually the same in professional practice. I expect you to follow the VT honor code as sound ethical practice and use it in preparation for a successful career once you graduate.
 - **American Society of Civil Engineers (ASCE) Code of Ethics:** Practicing civil engineers will be judged by ethical standards. If you have not already done so, I highly recommend that you acquaint yourself with the ASCE Code of Ethics: <http://www.asce.org/code-of-ethics/>

Resources to help prevent Honor System Violations

- Your academic advisor is a great asset for your academic success; get to know them and seek their advice.
- Your Professor/Instructor/Teaching Assistant - If in doubt, ask first!
- Read your syllabus more than once. It should contain an Honor Code statement that clarifies what is considered to be a violation and what is not. If in doubt ask.
- [The Student Success Center](#)
- [The Writing Center](#)
- [University Libraries](#) (Citation and style manuals)

“Today, I am going to give you two examinations, one in trigonometry and one in honesty. I hope you will pass them both, but if you must fail one, let it be trigonometry, for there are many good people in this world today who cannot pass an examination in trigonometry, but there are no good people in the world who cannot pass an examination in honesty”. **Madison Sarrat, (1891-1978) Dean, Vanderbilt University**

Principles of Community

The VT Principles of Community are intended to increase access and inclusion and to create a community that nurtures learning and growth for all of its members. They are defined at: <http://inclusive.vt.edu/vtpoc0.html> and reprinted below.

Virginia Tech is a public land-grant university, committed to teaching and learning, research, and outreach to the Commonwealth of Virginia, the nation, and the world community. Learning from the experiences that shape Virginia Tech as an institution, we acknowledge those aspects of our legacy that reflected bias and exclusion. Therefore, we adopt and practice the following principles as fundamental to our on-going efforts to increase access and inclusion and to create a community that nurtures learning and growth for all of its members:

- We affirm the inherent dignity and value of every person and strive to maintain a climate for work and learning based on mutual respect and understanding.
- We affirm the right of each person to express thoughts and opinions freely. We encourage open expression within a climate of civility, sensitivity, and mutual respect.
- We affirm the value of human diversity because it enriches our lives and the University. We acknowledge and respect our differences while affirming our common humanity.
- We reject all forms of prejudice and discrimination, including those based on age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status. We take individual and collective responsibility for helping to eliminate bias and discrimination and for increasing our own understanding of these issues through education, training, and interaction with others.
- We pledge our collective commitment to these principles in the spirit of the Virginia Tech motto of Ut Prosim (That I May Serve).

Grading Policies and Class Schedule

GRADE PERCENTAGES

<u>Type</u>	<u>Percentage</u>
Assignments	(60%)
Final Paper	(20%)
Participation	(20%)

GRADING SCALE

<u>Final Percentage</u>	<u>Grade</u>	<u>Final Percentage</u>	<u>Grade</u>
93 – 100	A	70 – 72	C –
90 – 92	A –	69 – 66	D +
86 – 89	B+	63 – 65	D
83 – 85	B	60 – 64	D-
80 – 82	B-	Below 60	F
76 – 79	C+		
73 – 75	C		

SYLLABUS POLICY

Any changes to the syllabus will be presented to the class in writing before the implementation of a new policy.

Grade Adjustments:

Grade adjustments will only be granted in cases of grading error.

Grades are earned by class performance and are not subject to adjustment based on other circumstances!