Spring 2019

TRAN 752-852: Traffic Control

Janice Daniel

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TRAN 752
TRAFFIC CONTROL
Section: 852

Instructor: Dr. J. Daniel
Office: 269 Fenster Hall
Phone: 973-642-4794
Email: daniel@njit.edu

Learning Objectives:	The objective of this course is gain and understanding of traffic control laws and devices. To be able to analyze the operation of traffic signals and to describe the operation of these signals in a technical report.
Text:	Roger P. Roess, Elena S. Prassas and William R. McShane, *Traffic Engineering*, Prentice-Hall Inc, 5th Edition 2019.
Reference Text:	*Highway Capacity Manual 6th Edition: A Guide for Multimodal Mobility Analysis*. Transportation Research Board, National Research Council, Washington, D.C., 2016. U.S. Federal Highway Administration. Manual of Uniform Traffic Control Devices for Streets and Highways, Washington, D.C., 2009. http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm
Instructor Responsiveness:	Emails will generally be responded to within 24-business hours Monday - Friday.
Moodle Tech Support:	If you are unable to log in or experience a problem please contact the NJIT Helpdesk - (973) 596-2900.
Grading:	HW* 10% Projects 20% Tests (2) 45% Final Project 25%
Homework:	Homework will not be thoroughly graded, but you will still need to turn in your homework. Credit will be provided based on your final answers given. No credit will be provided once solutions have been posted. For homework assignments you should submit two items: (1) electronic copy of the completed homework (Word, pdf, excel); and (2) An excel spreadsheet I will provide to you with every homework assignment where you will input your final answers for your homework. You will not be able to include all of your answers in the excel spreadsheet, but I will use both parts of the submission in grading your homework.
Electronic Submissions:	You should identify how you will submit assignments electronically. You can submit all types of attachments (pdf, doc, xls). For some assignments which includes calculations, it may be easier to scan your written work into a pdf and submit that document, rather than type out the equations. Having access to a scanner or a printer with a feature to create pdfs may be helpful. I did not include attachments that are

	photos of your assignment as a method of submitting assignments as it is typically difficult for me to read these types of attachments. If you choose to submit excel spreadsheets, please note that I will not be able to look at your formula or how the calculation was determined. Therefore, you should show all the steps to get to your final calculation.
Important Dates:	Test #1 Thursday, March 7th (6:00 – 7:30 pm) Test #2 Thursday, April 25th (6:00 – 7:30 pm) Final Project Due – Thursday, May 9th, 2019
Exam Policy	All exams are a 90 minutes administered through Moodle. Tests consists of various types of questions including some fill-in questions, some multiple choice questions, some calculation questions. The questions and some input variables will be randomly determined so each test will have some differences. **The exam will be administered at the same time for all students using the Respondus Lockdown Browser and a Webcam (see below for further details)** To save time, it is not necessary that you show your calculations during the test. You should, instead, provide your final answer during the test time and submit any calculations used to reach the final answer after the completion of the test. The calculations are used to provide partial credit and to ensure that you did the work to complete the exam. No credit is provided for questions where the answer provided in the calculations differ from answers provided during the test. No credit is provided if you do not show your calculations. It is better to show your work from the test, where partial credit can be provided, than to recreate an answer. Please save your answers as you go through the test. You can revise saved answers. The exam will close precisely 90 minutes after you begin, so please keep track of the time so you can submit your answers before time runs out. If you believe you are missing information to complete the question, please make an assumption and state your assumptions in the hand calculations. To avoid technical difficulties with the online test, the computer help desk suggests using Firefox or Google chrome for your internet browser while using moodle. Also your wireless connection can impact the ability to download figures or move from through the test questions without pausing. You may consider using a wired connection while taking the test. Please contact the university help desk if you would need clarification about connection problems. (973-596-2900).
Respondus LockDown Browser and a Webcam	Respondus LockDown Browser is a locked browser for taking assessments or quizzes in Moodle. It prevents you from printing, copying, going to another URL, or accessing other applications during a quiz. If a Moodle quiz requires that LockDown Browser be used, you will not be able to take the assessment or quiz with a standard web browser. You may be required to use LockDown Browser *with a webcam* (Respondus Monitor), which will record you during an online exam. **This course requires the use of Respondus LockDown Browser and/or Respondus Monitor with a webcam for online exams.** The webcam can be built into your computer or can be the type that plugs in with a USB cable. Watch this short video to get a basic understanding of LockDown Browser and the webcam feature. A student

	Quick Start Guide (PDF) is also available. 1. Download and install LockDown Browser from this link: http://www.respondus.com/lockdown/download.php?id=264548414 2. Once your download has finished, locate the "LockDown Browser" shortcut on the desktop and double-click it. (For Mac users, launch "LockDown Browser" from the Applications folder.) 3. You will be brought to the Moodle login page within the LockDown Browser, click "Login with your UCID" to log in with your NJIT UCID and password and then click Login. 4. Under "My courses", click on the course in which you have to take the exam that requires the LockDown Browser. 5. After you enter the course, find the exam and click on it. 6. A confirmation prompt will appear, click the "Start attempt" button. Once a quiz has been started with LockDown Browser, you cannot exit until the Submit all and finish button is clicked. 7. If you are required to use a webcam (Respondus Monitor), you will be prompted to complete a Webcam Check and other Startup Sequence steps.

Week of	**Topic**	**Reading**
1/21	Communicating with Drivers: Traffic Control Devices	Chapter 4, Chapter 16
1/28	Fundamentals of Intersection Design and Layout	Chapter 17
2/4	Principles of Intersection Signalization	Chapter 18
2/11	Fundamentals of Signal Timing and Design: Pre-timed Signals	Chapter 19
2/18	Capacity and Level of Service Analysis: Signalized Intersections – The HCM Method	Chapter 22
2/25	Planning-Level Analysis of Signalized Intersections	Chapter 23
3/ 4	**Test No. 1 – Thursday, March 7th (6:00 – 7:30 pm)**	-
3/11	Traffic Simulation/Synchro	Handouts
3/18	**SPRING RECESS☺- NO CLASS**	
3/25	Fundamentals of Signal Timing and Design: Actuated Signals	Chapter 20
4/1	Urban Streets and Arterials: Complete Streets and Levels of Service/Signal Coordination and Arterials and Networks	Chapter 24/Chapter 21
4/8	Unsignalized Intersections	Chapter 25
4/15	Roundabouts	Chapter 25
4/22	**Test No. 2 – Thursday, April 25th (6:00 – 7:30 pm)**	-
4/29	Interchanges	Chapter 26
5/6	Alternative Interchanges	Chapter 26
5/9	**Final Project Due – Thursday, May 9th**	