

School of Civil and Environmental Engineering Term 2, 2020 CVEN9415: TRANSPORT SYSTEMS PART 2

COURSE DETAILS			
Units of Credit	6		
Contact hours	4 hours per week		
Class	Wednesday, 12:00 – 14:00	Weeks 1 – 5 and 7 – 10:	
		Online-blackboard Ultra	
Workshop	Wednesday, 14:00 – 16:00,	Weeks 1 – 5 and 7 – 10:	
	Thursdays, 14:00 – 16:00,	Online-blackboard Ultra	
	Thursdays, 16:00 – 18:00		
	http://timetable.unsw.edu.au/2020/CVEN9415.html		
Course	Dr. Ali Ardeshiri		
Coordinator and	Email: <u>A.Ardeshiri@unsew.edu.au</u>		
Lecturer	Office:		

traffic intersections in real-world settings.

The learning goals that this course aims to achieve and details how the achievement of these goals will be assessed are described as follows:

- Understand operations research concepts applicable in the field of transport engineering.
- C Describe queuing theory concepts in transport context
- Compare modelling techniques (deterministic and stochastic) adopted in transport engineering practice.
- Apply queueing models and data analysis to real-world transport problems using real data.
- Generalise on modelling results to produce policy recommendations

TEACHING STRAT	EGIES	
Private Study	<	Review lecture material and textbook
	<	Do set problems and assignments
	<	Join Moodle discussions of problems
	<	Reflect on class problems and assignments
	<	Download materials from Moodle
	<	Keep up with notices and

5.	Design a research question, methodology and data approach for a real- world problem.	PE1.1, PE2.3, PE2.4, PE3.6
6.	Apply statistical methods to analyse real-world data.	PE1.1, PE1.2, PE1.3, PE2.2

7.

## ASSESSMENT OVERVIEW

Item	Length	Weighting	Learning outcomes assessed	Assessment Criteria (this needs to explicitly describe what students are expected to demonstrate in the task)	Due date and submission requirements	Deadline for absolute fail	Marks returned
Quiz 1	1 hour	20%	PE1.1, PE1.2, PE1.3, PE1.6	The Moodle quiz will assess students understanding of the basic's tenets of the queueing theory which will be applicable to the rest of the assessments in the course. The questions will be marked based on technical accuracy.	19-Jun-2020	19-Jun-2020	24-Jun- 2020
Assessment 1	5 pages	20%	PE1.1, PE1.2, PE1.3, PE2.2	This assignment will be based on the topics covered in the Week 4 lecture and workshop. The assignment tests a student's ability to understand and interpret the available real-world traffic data, which will also be used in the group project assessment later in the course. The questions will be marked based on technical and methodological accuracy.	10-Jul-2020	17-Jul-2020	24-Jul- 2020

Assessment 2 12 pages

es

CVEN9415 – Term 2 2020 – Course Profile Page 6 commencing project work. The aim of the project is to give students an experience of the practice followed by transport consultants in proposing solutions to real-world problems in transport. Students will also get experience working in a team environment and collaborating with team members during this project activity. The report will be

## **RELEVANT RESOURCES**

- Roess, Roger P., Elene S. Prassas, William R. McShane. Traffic Engineering. Third Edition, Upper Saddle River: Pearson Prentice Hall, 2004 (ISBN 0-13-142471-8)
- Vukan Vuchic. Urban Transit Operations, Planning and Economics John Wiley & Sons, 2005;
- Daganzo, C. Fundamentals of Transportation and Traffic Operations, Pergamon-Elsevier,Oxford, U.K. (1997)
- de Neufville, Richard. "Applied Systems Analysis Engineering Planning and Technology Management", McGraw Hill, 1990.
- Hall, W. Randolph. "Queueing Methods For Services and Manufacturing", Prentice Hall, 1991.
- Ravindran, A., Phillips, Don T. and Solberg, James J. "Operations Research Principles and Practice", John Wiley and Sons, 1987.
- Additional resources will be made available through Moodle

## DATES TO NOTE

Refer to MyUNSW for Important Dates available at:

https://student.unsw.edu.au/dates

## PLAGIARISM

Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

Plagiarism is the use of another person's work or ideas as if they were your own. When it is necessary or