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, Thursdays, 14:00 – 16:00, Thursdays, 16:00 – 18:00 http://timetable.unsw.edu.au/2020/CVEN9415.html	Weeks 1 – 5 and 7 – 10: Online-blackboard Ultra
Course Coordinator and Lecturer	Dr. Ali Ardeshiri Email: A.Ardeshiri@unsew.edu.au 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.
- 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 STRATEGIES

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						

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