

Course Outline Form: Fall 2016

General Information

Course Title: Operations Research

Course Description: This is a course in mathematical modelling which has applications to engineering, economics, business and logistics. Topics covered include linear programming and the simplex method, network models and the shortest path, maximum flow and minimal spanning tree problems as well as a selection of the following: non-linear programming, constrained optimization, deterministic and probabilistic dynamic programming, game theory and simulation.

Credit Weight: 0.5

Academic Department (or campus): Mathematics & Statistics

Campus: University of Guelph

Semester Offering: Fall 2016

Class Schedule and Location: MWF 2:30-3:30 in Rozh 105

Instructor Information

Instructor Name: Rajesh Pereira

Instructor Email: pereirar@uoguelph.ca

Office location and office hours: MacN 519, Office Hrs TBA

Course Content

Specific Learning Outcomes: Students in this course will learn the basic ideas and tools of Operations Research. They will see how to construct mathematical formulations of real world problems and will learn about some of the key algorithms used to solve a large class of these problems.

Lecture Content: The main topics of this course are linear programming, nonlinear programming, network models and game theory with linear programming and its applications being the largest single topic.

Course Assignments and Tests: Two midterms to be held in THRN 1307 on October 5th & October 26th both from 17:30 -18:50. There will be six assignments.

Final examination date and time: Wednesday, December 14th at 7:00pm

Final Examination regulations are detailed at:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-exam.shtml>

Course Resources

Required Texts: Operations Research, An Introduction 9th edition by Hamdy A. Taha.
We will cover chapters 1-7, 15, 20 and 21.

Course Policies

Grading Policies: Assignments 20%, Midterm 30% (15% each), Final 50%

Course Policy on Group Work: While you may consult with one another or any reference about the general ideas on assignments, any written work must be your own. It is not permitted to ask someone for step by step guidance on assignment problem nor to copy from the work of another student or any other source.

Course Policy regarding use of electronic devices and recording of lectures

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

University Policies

Academic Accommodation of Religious Obligations

If you are unable to complete a course requirement due to religious obligations, please let the instructor know within the first two weeks of class. See the academic calendar for more information:

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-accomrelig.shtml>

Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and

students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibilities Services (SAS) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: <http://www.uoguelph.ca/csd/>

Drop date

The last date to drop one-semester courses, without academic penalty, is **Friday, November 4, 2016**. For regulations and procedures for Dropping Courses, see the Academic Calendar: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>