Operations Research (620-261)

Lecturer: Peter Taylor
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Administration

- Lectures: Mon, Wed, Friday 3:15 PM
- Tutorials: Check Notice Board to find which class you are in.

Before Easter, the first tutorial of the week will be on Friday. The sheet will be handed out on the Wednesday before this and the assignment will be due for hand in on the following Friday.

After Easter, the first tutorial of the week will be on Monday. The sheet will be handed out on the Friday before this and the assignment will be due for hand in on the following Monday.
Administration - cont

- Office hours: Mon 2.00-3.00pm, Wed 2.00-3.00pm, Fri 2.00-3.00pm. This may have to vary sometimes - see my personal assistant Darla Trejo.

- Assessment: Assignments 10%, Exam 90%.

- SSLC: The representative is Melinda Glasson (m.glasson@ugrad.unimelb.edu.au)

- Website: http://www.ms.unimelb.edu.au/~s620261
Administration - cont

- Lecture notes: There are no printed lecture notes for this year’s course. I am currently redeveloping the lecture slides, which will end up in the form of ‘partial notes’ - a complete version does not yet exist. My recommendation is that you periodically download the slides and keep them in a neat paper form.

- Reference Material: Lecture slides, handouts, ten copies of *Operations Research: Applications and Algorithms* by W.L. Winston are on reserve in the mathematics library, specifically for 620-261 students.
Subject Culture

- **Group work:** You are encouraged to study with friends but you are expected to compose your own reports.

- **Communication:** I expect students to respond to questions that I ask during lectures. If you have suggestions, comments or complaints about anything to do with the subject, you can make these directly to me or via the SSLC representative.

- **Computer Literacy:** Applied mathematics is computational. I don’t expect any specific knowledge, but I do expect an open attitude to things computational.
What is OR?

● Controversial question!

● Surf the www for answers

● Roughly:
  .... Applications of quantitative scientific methods to decision making and support in business, industrial and military organizations, with the objective of improving the quality of managerial decisions .....
Basic Characteristics

- Applies scientific methods
- Adopts a systems approach
- Utilises a team concept
- Relies on computer technologies
OR Stream

- 620-261: Introduction to Operations Research
- 620-262: Decision Making
- 620-361: Operations Research Methods and Algorithms
- Probability and Statistics are useful other subjects to study
and more

- Honours
- MSc
- PhD
Jobs

- There is a shortage of people with OR skills
- Graduates with these skills get good jobs
The OR Problem Solving Schema

1. Realization that an ‘OR problem’ exists
2. Formulation into a mathematical model
3. Analysis of the model to answer the questions of interest
4. Translation of the answer into a form understandable by the ‘owner of the problem’

A large amount of iteration occurs, particularly over points (2), (3) and (4).