Instructor: Patrick Roh
E-mail: proh@math.uwaterloo.ca
Office: MC 5162
Extension: x36200

Lecture: MWF 9:30am-10:20am, PHY 235
Office Hours: MWF 10:30am-noon, MTW 1:30-3pm
(You can also e-mail for an appointment.)

TA Office Hours: Zhihan Gao | MC 6093 | Th 2-3pm

Text Book: CO 370 Course Notes will be posted on LEARN.
(We will be learning a subset of the material from CO370.)
Note: These course notes are quite old. There will be considerable changes from what we do in class versus what is in the course notes.

Grades: Assignments: 10%, Project: 10%, Midterm 25%, Final Exam 55%

Midterm: Tuesday March 5 from 4-6pm in QNC 2502

Course Website: The course website will be hosted on LEARN. Students are responsible for checking the website regularly for any relevant course information or announcements.

Course Schedule:

<table>
<thead>
<tr>
<th>Course</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear Programming</td>
<td>∼ 1 week</td>
</tr>
<tr>
<td>Linear Programming Review</td>
<td>∼ 2 weeks</td>
</tr>
<tr>
<td>Sensitivity Analysis</td>
<td>∼ 4 weeks</td>
</tr>
<tr>
<td>Integer Programming</td>
<td>∼ 2 weeks</td>
</tr>
<tr>
<td>Dynamic Programming</td>
<td>∼ 2 weeks</td>
</tr>
<tr>
<td>Stochastic/Robust Optimization</td>
<td>time permitting</td>
</tr>
</tbody>
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Assignments: There will be 5 assignments posted every 2 weeks on UW-ACE. Assignments are to be done INDIVIDUALLY and handed in at the BEGINNING of class on the due date. Assignments MUST BE STAPLED when handed in. Assignments may be handed in early directly to the instructor. Marked assignments will be returned in class or available for pickup during office hours. Any unclaimed assignments will be disposed of at the end of the term.

There will also be a special project due near the end of the term.

Programming in AMPL: The course will include learning how to solve mathematical programs using the software package AMPL. More information can be found on the course website.

Expectations: Students are expected to attend all classes, take notes during classes, and complete all assignments and exams. This course is a continuation of CO 227. All students are expected to review material from that course if necessary. Students are expected
to spend approximately 10 hours per week outside of the classroom on this course. This includes reading the course notes, doing assignments, and coming up with examples to try. Students having difficulty should see the instructor for assistance as soon as possible.

**Note For Students With Disabilities:** The Office for Persons with Disabilities (OPD), located in Needles Hall 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with OPD at the beginning of each academic term.

**Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility.

**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 Student Petitions and Grievances, Section 4, http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm

**Discipline:** A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about rules for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 Student Discipline, http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm

**Avoiding Academic Offenses:** Most students are unaware of the line between acceptable and unacceptable academic behaviour, especially when discussing assignments with classmates and using the work of other students. For information on commonly misunderstood academic offenses and how to avoid them, students should refer to the Faculty of Mathematics Cheating and Student Academic Discipline Policy, http://www.math.uwaterloo.ca/navigation/Current/cheating policy.shtml

**Appeals:** A student may appeal the finding and/or penalty in a decision made under Policy 70 Student Petitions and Grievances (other than regarding a petition) or Policy 71 Student Discipline if a ground for an appeal can be established. Read Policy 72 Student Appeals, http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm