

SYDE 533/730 Conflict Resolution

Course Outline Fall 2022

Course instructor: Dr. Simone Philpot.

Lectures: Monday 11:30-12:20 Location: E5 6008
Wednesday 11:30-12:20 Location: E7 4433/37
Thursday 10:30-11:20 Location: E7 5343

Tutorial: Thursday 12:30-1:20 Location: E5 6004

TA: TBA

Office Hours: TBA

*** Conflict Resolution is offered as SYDE 533 and SYDE 730. Students registered in SYDE 730 should contact Dr. Simone Philpot at sphilpot@uwaterloo.ca for further information specifically related to SYDE 730.**

Course Description.

Conflict resolution is significant to engineers because of the social and political influences in engineering decision-making. It is important that engineering planning and practice take into account not only the physical, environmental, and economic feasibility of a project, but also its social and political viability. The purpose of SYDE 533 is to present techniques for understanding and analyzing conflicts so that possible resolutions to problems can be determined and sound decisions made.

Overview

This course teaches features of conflict resolution techniques that are flexible, relatively easy to use in practice, and provide valuable insights into the problem being studied. Topics covered in SYDE 533 will include Conflict Resolution in Theory, Conflict Resolution in Practice, and a range of topics related to decision analysis and decision support systems. Students use formal Conflict Resolution and Decision Analysis methods to consider and analyze a variety of real-world conflicts.

Intended Learning Outcomes

Upon completion of this course, students will gain:

- A recognition of the need for, and skills in, decision analysis and conflict resolution.
- Knowledge of formal conflict modeling techniques.
- Familiarity with decision support systems in general, and skills in using at least one decision support system in particular.
- Topical expertise related to a conflict situation.

Pre-requisite Courses

It is preferable, but not necessary that students will have previously taken some mathematics courses at the university level. The theory behind the methods in conflict analysis is based upon

set theory, logic, and some basic ideas from graph theory. The required topics will be reviewed in the course.

Required Course Materials

Some material will be used from the book “Conflict Analysis: Models and Resolution”, by N.M. Fraser and K.W. Hipel, North Holland, New York, 1984. Some sections of “Interactive Decision Making: The Graph Model for Conflict Resolution”, by Liping Fang, Keith W. Hipel and D. Marc Kilgour, published by Wiley, New York, 1993 may be used. Finally, chapters from “Conflict Resolution Using the Graph Model: Strategic Interactions in Competition and Cooperation”, by H. Xu, K.W. Hipel, D.M. Kilgour and L. Fang, Springer, 2018 will be used. Supplementary articles may also be used.

All required materials will be available online (LEARN, Course Reserves, University of Waterloo library online access, online materials)

Course Evaluation

Progress will be encouraged and evaluated through both individual and group activities. The following methods will be used.

Component	
GROUP ASSIGNMENTS	
Topic and group members submission	---
Background Report	10%
Presentation	10%
Project Report	25%
INDIVIDUAL	
Assignment 1	10%
Assignment 2	10%
Midterm examination	35%

Written assignments will be submitted and feedback returned online. Individual assignments will be assessed using Crowd Mark and Group assignments will be evaluated via Dropbox. Details will be provided in lecture and on LEARN.

Waterloo Learn is a web-based course management system that enables instructors to manage course materials (posting of lecture notes etc.), interact with their students (drop boxes for student submissions, on-line quizzes, discussion boards, course e-mail etc.), and provide feedback (grades, assignment comments etc.). Users can login to Learn via: <http://learn.uwaterloo.ca/>. Use your WatIAM/Quest username and password. If you still cannot access LEARN after checking your password, please confirm with your instructor that you are on the class roster.

Important Dates.

Dates	Task/Event
TBA	Group work workshop
TBA	Submit team topic and members
TBA	Assignment 1 due
	Reading Week
TBA	Background Report due
TBA	Assignment 2 due
TBA	Mid-term examination
TBA	Presentations
	Classes end

Recommended Resources for Writing Skills

In this course, a high level of writing competency is expected. The University of Waterloo offers many useful resources for writing and research, we encourage all students to explore these options. We recommend that you visit the University of Waterloo Writing Center website to familiarize yourself with these services: <https://uwaterloo.ca/writing-centre/>

Email Policy (put SYDE 533 or SYDE 730 in the subject line of your emails)

- Important course updates will be posted using the Announcements tool on LEARN. Please check LEARN regularly. You can use the subscribe function on LEARN to facilitate this.
- Please direct course-related emails through the LEARN email function to ensure that you receive a prompt reply. We will aim to respond to emails within 2 working days (not including weekends). If you do not hear back from us within 3 days (not including weekends) please contact us again to ensure that we have received your email.
- Note that email is the official channel of communication between the University and its students. You are required to check your *uwaterloo.ca* email account regularly; we recommend that you check for course-related emails at least twice a week. If you use another email service (e.g., gmail), it is your responsibility to ensure that mail sent to your *uwaterloo.ca* account is forwarded to your other account.
- For guidance in communicating with your project partners, please refer to the course document 'Online Etiquette Tips' on LEARN.

Submission of assignments

Late policy: You are expected to take account of the possibility of computer failure in planning your time. The penalty for late assignments is 5 % of the total possible mark per day, including weekends and holidays, unless approved in advance by the instructors. Assignments submitted more than 5 days after the due date will not be accepted unless we have made a prior

arrangement. Please reach out the instructional team if you are unable to meet the course deadlines.

Unless otherwise indicated, **please submit your assignments as directed by 11:59 p.m. on the due date**. By submitting an assignment for this course, you are agreeing to the following:

- You have properly referenced all ideas, words or other intellectual property from other sources used in the completion of this assignment.
- You have included a proper bibliography, which includes acknowledgement of all sources used to complete this assignment.
- This is the first time you have submitted this assignment or essay (either partially or entirely) for academic evaluation.

Academic Integrity & Plagiarism: 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. For more information, please visit: www.uwaterloo.ca/academicintegrity/

Please familiarize yourself with the University of Waterloo's policy dealing with plagiarism. Plagiarism offences are treated seriously by the University and can result in significant penalties being assessed (e.g. failing grade on an assignment, repeating a course, suspension or expulsion).

To Avoid Plagiarism: The use of other people's work **must** be properly acknowledged and referenced in all written material such as take-home examinations, essays, laboratory reports, work-term reports, design projects, statistical data, computer programs and research results. The properly acknowledged use of sources is an accepted and important part of scholarship. Use of such material without complete and unambiguous acknowledgement, however, is an offence under policy 71.

Please visit the on-line tutorial at <http://www.lib.uwaterloo.ca/ait/>. See 'Check your understanding' to learn more about what constitutes an academic offence.

When You Cannot Meet a Course Requirement Due to Illness or Other Reasons: There will be no unpenalized extensions on assignments except for illness, severe personal extenuating circumstances, or weather emergencies. When you find yourself unable to meet a course requirement because of medical, compassionate or other reasons, please advise us in writing by email; make sure to include your full name in your message. Where possible, you must contact the instructors **in advance** of the assignment due date, but otherwise as soon as possible after the due date. As a rule, you must provide appropriate documentation, for example, a note from your doctor indicating the dates during which you were ill, and describing the severity of your illness. *Manage your time carefully. Pressure of work alone is not an acceptable reason for seeking an extension without penalty.*

University policies

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. [Check the Office of Academic Integrity for more information.]

Grievance: A student who believes that a decision affecting some aspect of their university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4. When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for their actions. [Check the Office of Academic Integrity for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline. For typical penalties, check Guidelines for the Assessment of Penalties.

Appeals: A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes they have a ground for an appeal should refer to Policy 72, Student Appeals.

Note for students with disabilities: AccessAbility Services, located in Needles Hall, Room 1401, 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 AccessAbility Services at the beginning of each academic term.

Turnitin.com: Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin in this course.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit alternate assignment.