

MATH 441 (2019W)

Formulation of real-world optimization problems using techniques such as linear programming, network flows, integer programming, dynamic programming. Solution by appropriate software.

This course is eligible for Credit/D/Fail grading. To determine whether you can take this course for Credit/D/Fail grading, visit the Credit/D/Fail website. You must register in the course before you can select the Credit/D/Fail grading option.

Credits: 3

Pre-reqs: MATH 340.

Instructor:

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Course website: <http://www.math.ubc.ca/~solymosi/441/441.html>

In this course you will work in teams of 4-5(-6) students. Most of your grade is based on a project, to be done in groups. Students not in a self-selected group will be assigned randomly into new groups.

You will learn the basics of combinatorial optimization. Then, you (your team) will choose an NP-complete problem.

You will present the selected problem and will try to come up with a solution plan. You are expected to use an optimization software in order to find the solution of a given problem.

I don't expect prior knowledge of programming, however it is not a bad thing if one of the team members has some affinity to coding.

There will be regular homework assignments. Late homework will not be accepted. Your lowest score will be dropped in the overall homework computation.

Each member of your group must present some material/slides, and must be prepared to answer questions on this material.

Academic Misconduct:

1. UBC takes cheating incidents very seriously. After due investigation, students found guilty of cheating on tests and examinations are usually given a final grade of 0 in the course and suspended from UBC for one year.
2. While students are encouraged to study together, they should be aware that blatant copying of another student's work is a serious breach of academic integrity. Please discuss with your instructors their expectations for acceptable collaboration on any assigned coursework. Cases of suspected cheating will be investigated thoroughly.
3. Note that academic misconduct includes misrepresenting a medical excuse or other personal situation for the purposes of postponing an examination or quiz or otherwise obtaining an academic concession.

Statement on UBC's Policies and Resources to Support Student Success:

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available at <https://senate.ubc.ca/policies-resources-support-student-success>