



Financial Modeling 3817B Optimization Methods

: Monday, Wednesday, Friday 9:30am-10:30am

The course will be delivered synchronously using Zoom in January, or until further notice from the university. When returning to in-person classes, the location is AHB 2B04.

Some important dates:

January 10 first day of classes

February 19–27 Reading Week

April 8 last day of classes

Mathematics 1600A/B and one of Calculus 2302A/B, Calculus 2502A/B or Calculus 2402A/B.

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

The course will cover approximately the following topics:

- Nonlinear optimization: gradient and Hessian tests, Lagrange multipliers
- Linear programming: The Simplex Method
- Duality theory for linear programming and Farkas type lemmas
- Sensitivity analysis for linear programming
- Integer programming
- Quadratic programming

Although the intent is for this course to be delivered in-person to the extent possible, the changing COVID-19 landscape may necessitate some or all of the course to be delivered online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience), as deemed most appropriate by the instructor. The grading scheme will not change. Any assessments affected will be conducted online as determined by the course instructor.

When deemed necessary, tests and examinations in this course will be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledging that you will be required to provide personal information (including some biometric data) and that the session will be recorded. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <https://remoteproctoring.uwo.ca>.

None. We will use the class notes from Prof. Hristo Sendov.

For online classes and assessments, you will need a laptop or computer, a working microphone and webcam and a reliable internet connection.

All material will be posted on the course OWL site (<http://owl.uwo.ca>). Students are responsible for checking the course OWL site on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

There will be four quizzes, one midterm, and one final exam. The quizzes will be worth 20% of the final grade, the midterm exam 35%, and the final exam 45%. There will be NO make-up to either the quizzes

or the midterm. If you miss the quizzes or the midterm (with documentation from the Academic Counselling office or self-reporting), the weight of the test(s) will be moved to the final exam. All the quizzes, the midterm and the final exam are closed-book exams.

The homework problem sets will be posted about 9 days before the quizzes. If we can return to in-person classes in the dates of the quizzes listed below, you do not have to hand in the homework questions, instead there will be a 30-minute quiz testing two of the homework problems. The problems on the fifth homework problem sets will be tested on the final exam. If we can't return to in-person classes in the dates of the quizzes, we will not have the quizzes tested in class. Instead, I will announce two of the homework questions at the end of the class and you will have 15 minutes to scan and submit your solutions. The rest of the homework questions may be used on the exams.

There will be four quizzes, each worth 5%. Tentative dates:

	January 26	February 4
	February 9	February 18
	March 9	March 18
	March 23	April 1
	April 6	The final exam

Friday, March 4, 2022, 9:30-10:30am in class. The last lecture covered on the midterm is Friday, February 18.

The final exam (worth 45%) will be a three-

- no more than two SRAs may be submitted during the Fall/Winter term
- (ii) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.
- (iii) Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Note that students are required to _____ within 24 hours of the end of the period covered.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons.

Students with disabilities work with Accessible Education (formerly SSD), which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf,

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf,

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Only non-programmable calculators will be allowed during tests.

are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

Please visit the