

# Course Outline Form: MATH 4600 – W 2022

Course Title: **MATH 4600 – Advanced Research Project in Mathematics, W [1.0]**

**Course Description:** Each student in this course will undertake an individual research project in some area of mathematics, under the supervision of a faculty member. A written report and a public presentation of the project will be required.

*Prerequisite(s):* 1.00 credits in Mathematics at the 3000 level or above

**Credit Weight: 1.0**

**Academic Department (or campus):** Mathematics & Statistics

**Campus:** Guelph

**Semester Offering:** Winter 2022

## Coordinator Information

**Name:** Monica Gabriela Cojocar

**Email:** [mcojocar@uoguelph.ca](mailto:mcojocar@uoguelph.ca)

## Course Content

**Each student in the course has a project advisor, independent of the course coordinator.** If you are interested in this course, you should discuss possible research topics with one or more faculty members in the department. If one agrees to supervise you for a particular project, then they will inform the course coordinator, who must also approve your enrollment in this course.

## **Assessment**

### **Non-grade assessments**

1. Each student can request, as needed, (remote online) meeting(s) with the course coordinator, at any time during the semester.
2. All students will participate in a 30min-1hr, remote online meeting with the course coordinator mid-semester. The meeting will be scheduled by the coordinator. Students' project advisors' attendance will not be mandatory. This will serve as a first introduction of all students in the course. Each student will be required to speak orally for a 5-10 minutes about their project and their progress up to that point. The course coordinator may take notes on students' progress and may provide feedback to students.

### **Graded assessments**

1. A research proposal, 2-3 pages in length (12 point font, 1 inch margins, single spaced). This proposal should describe the research that will be conducted and the methods or techniques that will be used. A timeline for the remainder of the semester must be included that specifies tasks to be completed and dates at which various milestones are expected to be reached. This timeline must be signed by the supervisor.

**NOTE:** If the student and project advisor have had previous research experience in the past, such as a summer collaboration or similar, both student and advisor are required to disclose this relation in the above proposal, as well as to clearly delineate how the work due to be completed in this course is either separate from or above and beyond previous works (this is 1 additional page - maximum). In addition, the student must include 1 slide in their Presentation stating their previous work on the topic (if this is the case) and how the semester work has progressed. This is to ensure complete transparency among all students taking this course.

Due date: **Friday, Feb. 4, 2022.** Assessed by project supervisor only. Weight: **15%**.

2. Supervisor's mark. The supervisor will establish a regular set of meetings with the student (typically weekly). These meetings may be either face to face or online. Through these meetings the supervisor will assess the student's participation and engagement, effort extended, work progress, and adherence to the project time-line. Ideally, the project advisor shall provide a written brief (by email) in support of their mark to the coordinator.

Due date: Semester's end. Weight: **15%**.

3. A final oral presentation, about 20 minutes in length using computer-generated slides. These presentations will be done remotely via Courselink Virtual Classroom, or similar software. All members of the class are expected to be present (remotely) for all talks. The intended audience is the other class members, that is, an audience that is mathematically and statistically literate, but not necessarily experts in the specific research area. Students are expected to ask questions of the presenter after the presentation.

Date: To be scheduled during the final week of classes. Assessed by both project supervisor and course coordinator. Weight: **20%**

4. A typeset final report, 15-20 pages in length (12 point font, 1 inch margins, single spaced, appendices and references not included in page count). The language of this report should be formal and professional, as if it were being submitted to a journal. The use of Latex is encouraged but not mandatory. The report should provide a thorough discourse of the 1 of 3 project, including pertinent background, a summary of at least **two** relevant papers from the literature and how they relate to the project, the methods employed in the project, results obtained, and a discussion of those results. The audience for the report is someone with at least as much understanding of the material as the student, that is, the student writer is not trying to convey information to other members of the class, who may not have much knowledge of the area, but rather to someone familiar with the field, like the supervisor.

Due date: **April 20, 2022**

Assessed by both supervisor and coordinator (or one other unrelated supervisor).

Weight: **50%**.

**NOTE:** For items 3 and 4, the course coordinator's and supervisor's marks will be weighted 1/4 and 3/4, respectively.

## **University Policies**

**Email Communication** As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

**When You Cannot Meet a Course Requirement.** When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course

instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

**Drop Date.** Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

*Undergraduate Calendar - Dropping Courses*

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

*Graduate Calendar - Registration Changes*

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

*Associate Diploma Calendar - Dropping Courses*

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

**Copies of Out-of-class Assignments.** Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

**Accessibility.** The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student. When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway. Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to book their exams at least 14 days in advance and not later than the 40th Class Day. For Guelph students, information can be found on the SAS website <https://www.uoguelph.ca/sas> For Ridgetown students, information can be found on the Ridgetown SAS website <https://www.ridgetownc.com/services/accessibilityservices.cfm>

**Academic Integrity.** The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community- faculty, staff, and students- to be aware of what constitutes academic misconduct and to do as

much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

*Please note:* Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

*Undergraduate Calendar - Academic Misconduct*

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

*Graduate Calendar - Academic Misconduct*

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

**Recording of Materials** Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

**Resources** The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs. Academic Calendars <https://www.uoguelph.ca/academics/calendars>

**Disclaimer** Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email. This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website

<https://news.uoguelph.ca/2019-novel-coronavirus-information/>

**Illness Medical** notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g. final exam or major assignment).

**Covid-19 Safety Protocols** For information on current safety protocols, follow these links:

<https://news.uoguelph.ca/return-to-campus/how-u-of-g-is-preparing-for-your-safe-return/>

<https://news.uoguelph.ca/return-to-campus/spaces/#ClassroomSpaces>

*Please note*, these guidelines may be updated as required in response to evolving University, Public Health or government directives.

**Mental Health Services:**

One out of every five students in Canada experiences some sort of mental health issue at some point in their academic career. If you find yourself facing a mental health crisis, or just need to talk to someone, please consider taking advantage of one of the following resources available to University of Guelph students:

**Counselling Services:** Visit the Counselling Services website (<https://wellness.uoguelph.ca/counselling>) to get information on resources available to you, both online and in-person. You can also visit them at Health Services (J.T. Powell Building, ext 53244) where they offer individual and group counselling sessions by appointment or walk-in.

**Student Support Network:** is located in the Wellness & Education Promotion Centre in the J.T. Powell Building and offers confidential, peer-based, drop-in support.

**Good2Talk:** ([1-866-925-5454](tel:1-866-925-5454)) is a free, 24/7 student hotline that provides professional counselling and referrals for mental health, addictions and well-being.

**Here 24/7:** ([1-844-437-3247](tel:1-844-437-3247)) specializes in assessment, referral and appointment booking and is available 24/7 for crisis support.

You are not alone and you will not be judged for asking for help.