

# MATH 2004/2008 A – Distance Education Summer 2020

## Multivariable Calculus for Engineering or Physics/ Intermediate Calculus

**Instructor:** Jason Crann

**Email:** jasoncrann@cunet.carleton.ca

**Course Dates:** May 4 – June 16, 2020.

**Lectures:** Posted on CULearn.

**Office Hours:** Thursdays 12:30–13:30, hosted on CULearn via Big Blue Button.

**Representative Textbook:** James Stewart, Multivariable Calculus, 9<sup>th</sup> edition. Brooks/Cole, Cengage Learning.

**Evaluation:** Best of two schemes:

Scheme 1:

- Weekly quizzes - 50%, best 4 of 6.
- Final exam - 50%.

Scheme 2: Final exam - 100%.

**Weekly quizzes:** There will be 6 weekly quizzes administered online through CULearn each Thursday. The quiz will open at 17:35 and will close at 18:25, giving you 50 minutes to complete it. Details on format and material for each quiz will be given the week prior. The first quiz will take place on Thursday, May 7 at 17:35.

**Final Exam:** Will be administered online at a scheduled time to be determined.

**Prerequisites:**

- Calculus: MATH 1005 or MATH 2007
- Linear algebra: MATH 1104 or MATH 1107.

Students who have not passed the prerequisite courses may be automatically de-registered during the term. Those that have done poorly in the prerequisites are strongly urged to take MATH 1005 before attempting this course.

**Approximate Course Outline:**

- Week 1 - Curves and surfaces defined by parametric equations, vector geometry.
- Week 2 - Functions of several variables, continuity, partial differentiation, and linear approximations.
- Week 3 - Critical points, level curves, directional derivatives and optimization problems.
- Week 4 - Double and triple integrals, cylindrical and spherical coordinates.
- Week 5 - Change of variables, Jacobians, vector fields.
- Week 6 - Fundamental theorems of vector calculus.

**Requests for Academic Accommodation:** You may need special arrangements to meet your academic obligations during the term. For accommodation requests, the processes are as follows:

- **Pregnancy obligation:** Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)
- **Religious obligation:** Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)
- **Academic Accommodations for Students with Disabilities:** If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. [carleton.ca/pmc](https://carleton.ca/pmc)
- **Survivors of Sexual Violence:** As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: [carleton.ca/sexual-violence-support](https://carleton.ca/sexual-violence-support)
- **Accommodation for Student Activities:** Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>
- **Deferred Exam:** Students who miss the final exam may be eligible for a deferral. Application for a deferral must be made, with appropriate documentation, to the Registrar's Office within five business days of the examination.