MATH 480 (MAST 657/MAST 857), Sec. A
Geometry & Topology
Fall 2023

Instructor: Dr. A. Stancu, Office: LB 921-27 (SGW), Phone: 848-2424, Ext. 5345
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Class Schedule: Mondays & Wednesdays, 10:15-11:30.

Office hours: Mondays, 1:00-2:30 p.m.


The textbook is available online as electronic resource at Concordia’s library.

In addition, graduate students have: Differential Geometry: Curves – Surfaces – Manifolds by Wolfgang Kühnel (Second edition).

Other material:
- Differential geometry of curves and surfaces by M.P. do Carmo
- Differential geometry of curves and surfaces by Kristopher Tapp
- Differential geometry by Theodore Shifrin (e-resource)
- Riemannian geometry by M.P. doCarmo (for MSc/PhD students)
- Riemannian manifolds by John M. Lee (for MSc/PhD students)

Topics: The following topics outline the content of the lectures: surfaces in three dimensions, the first and second fundamental forms of surfaces, curvatures of surfaces (principal, Gaussian, and mean curvature), geodesics, Gauss’ Theorema Egregium, the Gauss-Bonnet theorem.

Graduate students will complement this content by guided independent study of Riemannian geometry on manifolds or other topics at the instructor’s recommendation depending on individual mathematical interests, current background, and areas of study.

Final Grade: Homework 20%, Midterm Evaluation 30%, Final Evaluation 50%.
Undergraduate and graduate evaluations will differ in content.
The homework will be assigned approximately every two weeks, during class, and posted on Moodle. In case of a student’s absence or late arrival, it is the student’s responsibility to seek the assignment online and submit it on time. **No late assignments will be accepted.**

The midterm exam is scheduled for Wednesday, October 25th in class. Please be aware that a missed test cannot be made up.

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

**Academic Integrity and the Academic Code of Conduct**

This course is governed by Concordia University’s policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia’s website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity."  [Undergraduate Calendar, Sec 17.10.2]

**Behaviour**

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