Math 4250/6250 Syllabus

1. Course Information

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Our classroom: Marine Sciences/Dance 304
9:35-10:50 TR
http://www.jasoncantarella.com/

Book: **Theodore Shifrin, Differential Geometry: A first course in curves and surfaces**.

2. Course Schedule

This is a self-paced asynchronous course. The recommended course schedule is found on the course webpage. http://www.jasoncantarella.com/wordpress/courses/math-4250/.

3. Prerequisites

Students are expected to have a solid foundation in multivariable calculus, equivalent to that offered in the MATH 2270 or MATH 2500 course in order to enroll in the course. Computer skills in Mathematica or similar symbolic computation environment (Sage, Maple, Jupyter) will also be helpful.

4. Course Goals

Students will develop an understanding of the geometry of curves and surfaces, including curvature and torsion for space curves and Gauss and Mean curvature for surfaces. The course will include discussion of the geometry of three dimensional space. At the end of the course, students should be prepared for a graduate course in Riemannian geometry.

5. Disclaimer

The syllabus is a general course plan and represents the best available information at the time of writing (early January 2021). However, I have never taught in this format before, and I expect that many adjustments will be made over the course of the semester.

6. Principal Course Assignments

This course is taught in a "hybrid asynchronous" model. Course material will be presented in the form of reading assignments, short videos, and minihomework assignments posted on the course webpage: http://www.jasoncantarella.com/wordpress/courses/math-4250/. Homework will be turned in (online only) through Gradescope http://www.gradescope.com/ (course entry code 866J4X) and returned through Gradescope as well.

There will be two in-person proctored exams (a midterm exam and a final exam), versions of which will be made available at several different times, with remote proctoring available for students who cannot attend in-person. Exams and exam grades will be returned via GradeScope. **Note that ELC will not be used for this course.**

7. Grading and Policies

During the pandemic, assessing student work is exceptionally difficult, since every student's situation is likely to be somewhat different. There are due dates for homework assignments in order to help you stay on schedule, but they are negotiable if you need more time. The grading structure for the course is 50% for the homework assignments (total), and 25% for each exam. The course curve is expected to be 80-100 (A), 60-80 (B), 40-60 (C), below 40 (F). Grades of "D" will not be awarded.

8. Attendance Policy

In-person attendance is optional for all students and all classes. Since our classroom is limited to 20 people, we are using the Bookings page: https://outlook.office365.com/owa/calendar/Math42506250JasonCantarella@groups.uga.edu/bookings/s/QQLDfS-NoEOy2ZGl_aYmSw2 to manage which students are coming to class each day. Please sign up on the page for any class periods you want to attend and bring your questions and in-progress homework! Online office hours will also be offered through Bookings (with limited capacity). The design of the course is that **everything available in the in-person sessions will also be available via online content and online office hours**.

9. Academic Honesty

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in A Culture of Honesty found at: www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Group work on homework problems is strongly encouraged. However, to get the most out of group work, you need to follow a few simple rules:

- Cite your sources– generously. Example: "After some online searching, I found a helpful discussion on StackExchange (include the url), which suggested that I try the approach below." or "I talked about the problem with Fionna, and got this idea."
- Help others– responsibly. Example: "Why don't you try . . . ?", or "It helped me to think about the problem this way."
- Do your own writeups, preferably alone. If your homework shares lots of complete sentences with someone else's, it might be a sign that you haven't fully digested the solution. You'll learn more from rephrasing, even if you're mostly following along with something you've found elsewhere.
- If you're honest, you can't get in trouble over honesty, even if you don't do all the work on your own. Example: "I couldn't figure out the solution to (problem) on my own, but I was able to work through it with a friend who had already taken the course. I copied their solution by hand and tried to rewrite it where I could." is completely ok, worth substantial partial credit, and I won't think any less of you. On the other hand, just copying someone else's solution and representing it as all your own *is* a violation of the academic honesty policy.

10. Make-up Examinations

The course midterm will be made available at several times, as well as with a remote proctoring option. Make-up examinations for the midterm are still possible at the discretion of the instructor, but should be limited to very unusual (generally medical) situations. Make-up examinations for the final are generally not possible; the usual solution is to give a grade of "Incomplete" and make individual arrangements with students who (in the instructor's opinion) have a valid reason for missing the final.

11. Coronavirus Information for Students

Our most important goal for the (exceptional) Spring 2021 is to **keep each other safe and healthy**. Our secondary goal is to keep your education moving forward as well as we can under the circumstances. Therefore, I'm encouraging everyone to think about the risks you take, on campus and off, and to minimize nonessential contacts. If you find that online office hours work as well for you as the in-person classes, you are encouraged to use the safer online option. If you need to be in person, please sign up and come, and take care of yourself in the meantime.

11.1. **Face Coverings.** As a reminder, the University of Georgia (along with all University System of Georgia (USG) institutions) requires all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Students seeking an accommodation related to face coverings should contact Disability Services at https://drc.uga.edu/.

11.2. **DawgCheck.** Please perform a quick symptom check each weekday on DawgCheck (on the UGA app or website) whether you feel sick or not. It will help health providers monitor the health situation on campus: https://dawgcheck.uga.edu/

11.3. **What do I do if I have symptoms?** Students showing symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies.

11.4. **What do I do if I test positive?** Any student with a positive COVID-19 test is required to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.

11.5. **What do I do if I am notified that I have been exposed?** Effective Jan. 4, 2021, students who learn they have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for 10 days (consistent with updated Department of Public Health (DPH) and Centers for Disease Control and Prevention (CDC) guidelines). Those quarantining for 10 days must have been symptom-free throughout the monitoring period. Please correspond with your instructor via email, with a cc: to Student Care and Outreach at sco@uga.edu, to coordinate continuing your coursework while self-quarantined.

We strongly encourage students to voluntarily take a COVID-19 test within 48 hours of the end of the 10-day quarantine period (test to be administered between days 8 and 10). Students may obtain these tests at Legion Field (https://clia.vetview.vet.uga.edu/) or at the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in the University Health Center without an appointment. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies.

If the test is negative, the individual may return to campus, but MUST continue to closely monitor for any new COVID-19 symptoms through 14 days. DawgCheck is the best method for monitoring these symptoms. If new symptoms occur, the individual must not come to campus and must seek further testing/evaluation.

If the test is positive at the end of the 10-day period, the individual must begin a 10-day isolation period from the date of the test.

11.6. **How do I participate in surveillance testing if I have NO symptoms?** We strongly encourage you to take advantage of the expanded surveillance testing that is being offered from January 4 – 22: up to 1,500 free tests per day at Legion Field and pop-up locations. Testing at Legion Field can be scheduled at https://clia.vetview.vet.uga.edu/. Walk-up appointments can usually be accommodated at Legion Field, and pop-up saliva testing does not require pre-registration. For planning purposes, precise sites and schedules for the pop-up clinics are published on the UHC's website and its social media as they are secured: https://www.uhs.uga.edu/healthtopics/covid-surveillance-testing.