COURSE SYLLABUS

MATH 4391/6391 (PHYS 4391/6391)
INTRODUCTORY DIFFERENTIAL GEMETRY
SPRING 2007

Days & Time: MW 3:00 pm - 4:15 pm
Room: # 180 of College of Education Building
CRN: 15283/15284,
Instructor: Dr. Andrey Shilnikov
Office: # 724 of College of Education Building
Office Hours: MW 11:00-11:45 am, other times by appointment
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Departmental phone: (404) 651-2245
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Web: http://www.mathstat.gsu.edu/~matals
Prerequisites: Grade of C or higher in MATH 2215 or a suitable score on the math placement test.
Text: Elementary Differential Geometry, 2th edition by Barrett O'Neill, Elsevier 1997.

Description: Theory of curves and surfaces in parametric and implicit form. Curvature and torsion of a curve. Differential forms of a surface. Topological properties of surfaces. The Shape operator, Normal curvature and Gaussian curvature. Special curves in a surface. Surfaces of revolution. The Fundamental equations. Isometries and local isometries. The Gauss - Bonnet Theorem. Applications to physics.

Grading: There will be a total of 600 points possible for this course. The points are distributed as follows

Three exams	300 = 100*3
Final exam	200
Three quizzes	60=20*3
Extra credit	40

Your total accumulated points will determine your grade

A	504-600
B+	487-503
B	448-486
C+	431-447
C	392-446
D	336-391
F	0-335

Note: During the first two weeks of the semester the Department of Mathematics and Statistics checks the computer records to determine whether or not each student has met the prerequisites for this course. If you do not have the prerequisites, please inform me and change to another course right away. If our computer search finds that you do not have the prerequisite, you must drop this course or you will be dropped automatically.
If you do not attend class during the first two weeks you will be administratively dropped.

Withdrawal Policy: If you withdraw from this class on or before W-Day (**March 1, 2007**) you will receive a W regardless of your performance. If you hardship withdraw after this date (a regular withdrawal at this point gives you an automatic WF) you will receive a W **ONLY** if you are passing (70 average or better); otherwise you will receive a WF (which averages into your GPA just like an F).

Procedures: Class meets twice a week. Taking good notes during the class is of significant importance. Homework will be assigned in each class. After the class, read the book, read your notes and do as many of the homework problems as you can prior to the next class. Try to get the remaining problems explained in the next class. You are responsible for all material covered in class, whether or not you attended this class.

Examinations: There will be 3 hourly exams and the final exam (two hours). All hourly exams will be taken during the regular class time and in the regular classroom. Books and notes will not be allowed on all tests. *There will be no make-up exams except in an extreme verifiable emergency.* Absence from the final exam will result in a grade of F for the course unless arrangements are made *prior* to its administration.

Academic Dishonesty: Plagiarism and cheating are serious offenses and may be punished by failure on the exam. Repeated cheating will result in a grade F for the course.

Studying: You *must* work on this course every week. The pace is hectic and allowing you to fall behind will end in disaster.

Homework: Working on the homework assignments is an essential part of the course. It is critical for your success on the exams.

Inclement Weather Policy: If the University is closed due to inclement weather, any exam that may have been scheduled for that date will be administered on the next available class date. If an assignment is due that day (or if you are scheduled for an exam) it will be due the next class.

Attendance and Conduct Policy:
Turn off all pagers and cell phones before entering the classroom – having these items "go off" in class is considered disruptive behavior and can result in your being administratively dropped from the course. In fact, any type of inappropriate conduct may result in your being administratively dropped from the course. See the University's Policy on Disruptive Behavior in the *General Catalog*, p. 19 (www.gsu.edu/images/Downloadables/UG_05_06.pdf) or *On Campus*, the official student handbook (www2.gsu.edu/~wwwdos/codeofconduct_adminpol_a.html).

Academic assistance at GSU:
1.   Form study groups with classmates
2.   See instructor during office hours
3.   Visit the Math Assistance Complex, 122 Kell Hall (404-651-3365)
4.   Attend Supplemental Instructions, MW 2:45-4:25, r. 427 (GCB)
5.   Visit the Counseling Center: Learning assistance, Test anxiety classes,
        Student support services (404-651-2211)
6.   African American Student Services (404-463-9000)
7.   Private tutor list is available at Math Assistance Complex and Math Department

This syllabus provides a general plan for the course; deviations may be necessary.