Instructor: Slobodan Simić
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Web: http://www.math.sjsu.edu/~simic/Fall07/Math213/213.html
Prerequisite: Math 113 (with a grade of "C−" or better) or instructor consent.
Office hours: MW 10-12, M 3-4 (subject to change)
Homework: Weekly homework assignments will be collected and graded.
   It is essential that you do every homework exercise. My late homework policy is: one class late – 50% penalty, two classes late – no credit.
Tests: There will be one take-home midterm and a final exam. Each student will also write a short literature review paper on topic of his choice and present it to the whole class.
   Midterm: October 24
   Final exam: December 17, 12:15-14:30
   There will be no make-up exams.
Grading policy: Homework 20%, Midterm 20%, Paper 20%, Final 40%
Course outline: Introduction to manifolds (Chapter I). Brief review of calculus of several variables (parts of Ch. II). Differentiable manifolds and submanifolds (Ch. III). Vector fields on manifolds (parts of Ch. IV). Riemannian metric and Riemannian manifolds (Ch. V.1-4). Integration on manifolds (parts of Ch. VI). Covariant differentiation, parallel transport, the curvature tensor, geodesics (parts of Ch. VII). Curvature (parts of Ch. VIII).
Main goals: Our main goal will be to understand the concept of a Riemannian manifold and its fundamental properties.

The notion of an abstract smooth manifold involves ideas from topology, analysis, and geometry, which is why it is not easy to grasp. We will spend about half of the semester studying smooth manifolds without any extra structure. In the second half, we will focus on the notion of a Riemannian manifold, which is a smooth manifold with a Riemann structure on it. Our goal will be to understand the notions of geodesic curves, parallel transport, and curvature, generalizing some of the results of classical differential geometry to higher-dimensional abstract manifolds.

Participation: During class please feel free to stop me at any time and ask questions. I encourage and greatly appreciate students’ participation.

Feedback: I appreciate constructive feedback which you can give me via the anonymous feedback form on the class web page, by email, or in person.

Academic integrity: From the Office of Student Conduct and Ethical Development: Your own commitment to learning, as evidenced by your enrollment at San José State University, and the University’s Academic Integrity Policy, require you to be honest in all your academic course work. Faculty are required to report all infractions to the Office of Student Conduct and Ethical Development. The policy on academic integrity can be found at http://sa.sjsu.edu/student-conduct.

Campus policy in compliance with the Americans with Disabilities Act: If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with your instructors as soon as possible, or see them during office hours. Presidential Directive 97-03 requires that students with disabilities register with DRC to establish a record of their disability.

Class attendance: According to University policy F69-24, Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.