University of Alaska Fairbanks

PHYS/MATH 611 Mathematical Physics I
Fall 2014

Credits: 3.0

Lectures: REIC 204 TR 11:30 am -1:00 pm

Instructor: Dr. Roman Makarevich
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Office Hours: REIC 116 TR 9:30-11:00 am, ELVE 708B by appointment.

Course Content: The course is the first part of a two-semester sequence PHYS/MATH 611/612 that presents methods and ideas of modern mathematics important for science, engineering and, in particular for physics. The PHYS/MATH 611 course will start with a review of vector and tensor analyses followed by an introduction to functions and operators in infinite dimensional spaces. The course will also cover matrix and operator eigenvalue problems and complex variable theory including analysis of singularities and contour integration methods.

Text: "Mathematical Methods for Physicists", 7th ed., by Arfken, Weber, and Harris

Lecture notes: Some of the instructor's notes will be made available on the Blackboard.

Grading: The course grade will consist of the following components:

Homework	Due on Thursdays, 11:30 am	50%
Mid-term	Thursday Oct 30, 11:30 am – 1:00 pm	20%
Final exam	Tuesday Dec 16, 10:15 am – 12:15 pm	30%

Homework: There will be approximately one homework assignment per week. The assignment will be posted on the homework Web page by Thursday and will be due on the following Thursday by 11:30 am. You are allowed to work with others on the homework, but make sure the paper you turn in is not simply copied from someone else. **All homework assignments must be turned in directly to me in class**. **No emailed or otherwise electronically-submitted assignments will be accepted**. Late assignments will be generally marked down as follows: minus 10% points per one day late up to 7 days, minus 100% after 7 days late. The exceptions will be assignments due on October 23 and December 4 that will **not** be accepted late.

Mid-Term Exam: The mid-term exam will be on Thursday, October 30, 2014, during the regular lecture time. The exam will be closed-book, but you will be given most of the needed equations. The mid-term exam will cover material covered up to this point (details to be confirmed).

Final Exam: The final exam will be at 10:15 am – 12:15 pm, Tuesday, December 16, 2014. The final will be closed-book, but you will be given most of the needed equations. It will cover the entire course, with some emphasis on the more recent material.

Every student will be given a raw score out of 100%. A raw score above 90% will be at least an A, above 80% will be at least a B, above 70% will be at least a C, above 60% will be at least a D. No +/- grades will be given with a possible exception of A+,A-, B+, and B-.

Special Needs: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. We will work with the Office of Disabilities Services (Room 203 WHIT, Phone 474-7043) to provide reasonable accommodation to students with disabilities.

Plagiarism: Plagiarism and cheating are matters of serious concern for students and academic institutions. This is true in this class as well. The UAF Honor Code (or Student Code of Conduct) defines academic standards expected at the University of Alaska Fairbanks which will be followed in this class. (Taken from the UAF plagiarism web site, which has many links with good information about this topic)

Complaints and Concerns: You are always welcome to talk to me about anything, however, if you have a non-subject matter question or concern that cannot be resolved by me, contact the department chair, Dr. Szuberla, Physics Department Office, Room REIC 110.