

**MATH 721**  
**Applied Mathematics II**  
*Spring 2008*

**Meeting times (lectures):** MWF 1:25 – 2:15 PM at LeConte (LC) 405.

**Instructor:** Dr. Peter G. Binev     <http://www.math.sc.edu/~binev/>  
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phones: 576-6269 (at LC 425) or 576-6304 (at SUM 206H)

**Office hours:** MWF 11:00 – 12:00 AM at LeConte 425/Sumwalt 204, or by appointment.

**Text: Principals of Applied Mathematics: Transformation and Approximation**, by James P. Keener, Westview Press, 2000.     [http://www.perseusbooksgroup.com/westview/book\\_detail.jsp?isbn=0738201294](http://www.perseusbooksgroup.com/westview/book_detail.jsp?isbn=0738201294)

The course will review the basic theory for vector spaces and function spaces (chapters 1,2) and consider in depth the material on Integral Equations (chapter 3), Calculus of Variations (chapter 5), and Transforms and Spectral Theory (chapter 7), as well as some topics from Differential Operators and Partial Differential Equations (chapters 4,8). If time permits, some topics from the rest of the book (already considered in MATH 720) will be also discussed.

**Prerequisites:** MATH 720, or equivalent.

**Cell Phones:** All cell phones *must be turned off* during the class.

**Homework:** A few homework problems will be assigned each class. Be sure to do these problems before the next class. Each week the solution of one of these problems (announced in advance) will be collected and graded.

**Discussions:** The homework will be discussed in class. The participation in the discussions is important part of the course.

**Midterm Exam:** There will be a midterm exam in a form of a test before the Spring Break (the date will be announce well in advance). The problem on the test will be similar to the ones from the homework.

**Final Exam:** The final exam will be a test with problems similar to the ones from the homework. The date of the final is Tuesday, May 6 - 2:00 p.m. The test should give a general idea about the problems on the Comprehensive Exam to students that take this course as part of a comprehensive sequence.

**Grading:** The final grade will be determined from the homework and the participation in the discussions (30%), the midterm exam (20%), and the final (50%).

**Academic Dishonesty:** Cheating and plagiarism will not be allowed (see <http://www.jour.sc.edu/pages/academicintegrity/policies.html>).

**ADA:** If you have special needs as addressed by the Americans with Disabilities Act and need any assistance, please notify the instructor immediately.