Pure Math 450/650 Winter 2016

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Class meets: MTΘ 1:30–2:20 in Phys 235
Website: www.math.uwaterloo.ca/~krdavids/PM450.html

Reference books: The first two were ordered for the bookstore and are very inexpensive, as is Seeley. The last two books are more advanced.

- An Introduction to Lebesgue Integration and Fourier Series by H.J. Wilcox and D.L. Myers
- Fourier Series by G.P. Tolstov
- An Introduction to Fourier Series and Integrals by R. Seeley
- Real analysis with real applications or Real analysis and applications: theory in practice by K.R. Davidson and A.P. Donsig
- An introduction to harmonic analysis by Y. Katznelson
- Real analysis by H.L. Royden

Course Outline
- The steady state heat problem and Fourier series
- Summing Fourier series of continuous functions
- Introduction to Lebesgue measure
- Fourier series of $L^p(\mathbb{T})$ functions

Grading
- There will be approximately 6 (within 1) assignments.
- Undergraduates: Assignments 40%, Final Exam 60%.
- Math grad students: Assignments 40%, Talk 10%, Final Exam 50%.
- Graduate students in other faculties: the talk is optional.
The University Senate mandates that every course outline must contain the following text.

**Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. Check [www.uwaterloo.ca/academicintegrity/](http://www.uwaterloo.ca/academicintegrity/) for more information.

**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read *Policy 70, Student Petitions and Grievances*, Section 4, [http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm). When in doubt please be certain to contact the department’s administrative assistant who will provide further assistance.

**Discipline:** A student is expected to know what constitutes academic integrity to avoid committing academic offenses and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the undergraduate associate dean. For information on categories of offenses and types of penalties, students should refer to *Policy 71, Student Discipline*, [http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm). For typical penalties check *Guidelines for the Assessment of Penalties*, [http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm](http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm).

**Appeals:** A decision made or penalty imposed under *Policy 70, Student Petitions and Grievances* (other than a petition) or *Policy 71, Student Discipline* may be appealed if there is a ground. A student who believes he/she has grounds for an appeal should refer to *Policy 72, Student Appeals*, [http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm).

**Students with disabilities:** The *Access Ability Services*, located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the Access Ability Services at the beginning of each academic term.