

## AM4815b—Partial Differential Equations II

January-April 2016

**Instructor:** Xingfu Zou

**Office:** MC284

**Course Website:** <https://owl.uwo.ca>

**Email:** [xzou@uwo.ca](mailto:xzou@uwo.ca)

**Phone:** 88781

**Office Hours:** TBA after discussing with class.

**Lecture (001):** Mon-Wed-Fri, 9:30am-10:30am, Room MC-17

**Textbook:** *Applied Partial Differential Equations: with Fourier series and boundary value problems* by Richard Haberman, 5th edition (2014), Pearson.

**Prerequisite:** AM3815—Partial Differential Equations I.

### Course Topics:

This course is a continuation of the course AM3815a—Partial Differential Equations I, in which the method of separation of variables, Fourier and Laplace transforms are the main tools. In this course, the focus will be on various linear *but nonhomogeneous* problems, and the main tool will be Green functions *under various scenarios for spatial domain*. The plan is to cover Chapters 8, 9, 10, 11. Time permitting, we will also briefly explore the method of characteristics for some first order PDEs.

### Course Evaluation:

Assignments: (10%); Midterm exam (40%); Final exam (50%):

- (i) The main purpose of **assignments** is to push you to digest the course materials by doing exercises. Thus, the assignments are only given a very small percentage (10 %) toward your final grade. Problems will be assigned, and completed assignments will be collected and marked *partially and selectively only though*. Due times for handing in assignments will be strictly followed. Group study and discussion when working on assignments (and preparing for exams) are encouraged, but copy-each-other in completing assignments is *absolutely not allowed*. If two or more assignments are found to be too similar to each other, penalty will be implemented.
- (ii) **Midterm exam** will be on Monday, February 22 (right after the reading week break) at 7:00-9:00pm, and the room will be announced later.
- (iii) **Final exam** will be schedule by the university's registrar's office.
- (iv) In both midterm and final examinations, no electronic devices, including calculators and cell phones, are allowed.

**Missing exam:** If for a reason acceptable by the university's policy, you have to miss the midterm or final exam, you need to obtain a permission from your Dean's office and I have to be notified of the permission **in advance**. Only when these are followed, can we discuss an arrangement, either re-weighing or writing a make-up, depending on the situation.

**Accessibility:**

Please contact the course instructor if you require material in an alternative format or if you require any other arrangement to make this course more accessible to you. You may also wish to contact Service for Students with Disabilities (SSD) at 661-2111 ext 82147 for any specific question regarding an accommodation.

**Support Services:**

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling. Students who are in emotional/mental distress should refer to Mental Health@Western ([http://www.health.uwo.ca/mental\\_health](http://www.health.uwo.ca/mental_health)) for a complete list of options about how to obtain help. Additional student-run support services are offered by the USC, <http://westernusc.ca/services>. The website for Registrarial Services is <http://www.registrar.uwo.ca>.

**Academic Dishonesty:**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at this website:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf). Computer-marked, multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating

**Missed Course Components:**

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Academic Counselling Office of your home faculty as soon as possible. If you are a **science student**, the Academic Counselling Office of the Faculty of Science is located in WSC 191, and can be contacted at 519-661-3040 or [scibmsac@uwo.ca](mailto:scibmsac@uwo.ca). Their website is

[http://www.uwo.ca/sci/undergrad/academic\\_counselling/index.html](http://www.uwo.ca/sci/undergrad/academic_counselling/index.html).

A student requiring academic accommodation due to illness must use the Student Medical Certificate ([https://studentservices.uwo.ca/secure/medical\\_document.pdf](https://studentservices.uwo.ca/secure/medical_document.pdf)) when visiting an off campus medical facility. For further information, please consult the university's medical illness policy at

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see [http://www.registrar.uwo.ca/examinations/exam\\_schedule.html](http://www.registrar.uwo.ca/examinations/exam_schedule.html)).