

AM3615a—Introduction to Mathematical Biology

September-December 2014

Instructor: Xingfu Zou

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Office Hours: TBD

Lecture: Mon-Wed-Fri, 3:30am-4:30pm, UCC-63

Textbook: *N. F. Britton, Essential Mathematical Biology, Springer-Verlag, 2003.*

Other Reference Books:

- L. Edelstein-Keshet, *Mathematical Models in Biology*, Society of Industrial and Applied Mathematics, 2005
- Fred Brauer and Carlos Castillo-Chavez, *Mathematical Models in Population Biology and Epidemiology*, Springer-Verlag, New York, 2001.
- D. S. Jones and B. D. Sleeman, *Differential Equations and Mathematical Biology*. Chapman and Hall/CRC, 2003.
- J. D. Murray, *Mathematical Biology*, Springer-Verlag, 1993

Course content:

Tentatively: Single species population dynamics, population dynamics of interacting species, infectious diseases, population genetics and evolution, tumour growth.

Evaluation: 40% – Assignments; 30% – Midterm Exam; 30% – Final Exam.

Notes:

(i) All materials covered in lectures (some may be extra to the text) up to the end of the course can be considered testable in the quizzes and exams. For this reason, students are advised not to miss classes. Problems may be assigned for practice purpose, and will not be collected and marked.

(ii) **Midterm exam** will be on Thursday, October 23, 7:00-9:00, with the room to be determined later.

(iii) **Final exam** will be schedule by the university's registrar's office.

(iv) **No make-up** for missed midterm exam will be arranged. If for a reason acceptable by the university's policy, you have to miss the midterm exam, you need obtain a permission from the Science Dean's office and I have to be notified of the permission **in advance**; in such a case, I will re-weight your missed quiz/midterm to your final exam.

Addendum to all Applied Mathematics Course Outlines

Accessibility Statement: 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.

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 your faculty's Deans Office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a Recommendation of Special Examination form must be obtained from your faculty's Deans Office immediately. For further information please see:

<http://www.uwo.ca/univsec/handbook/appeals/medical.pdf>

A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Records Release Form (located in the Deans Office) for visits to Student Health Services. The form can be found here:

<https://studentservices.uwo.ca/secure/medicaldocument.pdf>