

Course Outline Form: Winter 2016

General Information

Course Title: STAT4340 Statistical Inference

Course Description:

This course reviews and extends the theory of estimation introduced in [STAT*3110](#). Topics including point estimation, interval estimation, hypothesis testing and decision theory will be presented from both the frequentist and likelihood-based perspectives. Foundational issues concerning the frequentist and Bayesian paradigms will also be discussed.

Credit Weight:

0.5

Academic Department (or campus): Mathematics & Statistics

Campus: University of Guelph

Semester Offering: Winter 2016

Class Schedule and Location: M2:30-5:20 CRS403

Instructor Information

Instructor Name: Ed Carter

Instructor Email: ecarter@uoguelph.ca

Office location and office hours: MF 1:30-2:30

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Course Content

Specific Learning Outcomes:

Students will understand the basic methods and principles of statistical inference.

Lecture Content:

.Probability, distributions, sampling distributions, sufficiency, ancillarity, completeness, likelihood principle, Bayesian methods, properties of estimators. Hypothesis testing, interval estimation, asymptotics.

Course Assignments and Tests:

	Date	Worth
Assignments	Every two weeks approx	40%
Mid-term	Feb 29 in class	30%
Project	April 13	30%
Total		100%

Course Resources

Required Texts:

'Statistical Inference', Casella and Berger, 2nd Edition, Nelson Canada.

Course Policies

Grading Policies

All assignments will be submitted on time unless prior approval is obtained.

University Policies

Academic Accommodation of Religious Obligations

If you are unable to complete a course requirement due to religious obligations, please let the instructor know within the first two weeks of class. See the academic calendar for more information:

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-accomrelig.shtml>

Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibilities Services (SAS) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: <http://www.uoguelph.ca/csd/>

Course Evaluation Information

Please see <http://www.mathstat.uoguelph.ca/files/TeachevaluationformF10.pdf>

Drop date

The last date to drop one-semester courses, without academic penalty, is **Friday, March 11, 2016**.

For regulations and procedures for Dropping Courses, see the Academic Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>