

ECON 768 Advanced Econometrics

Course Syllabus, Fall 2024

Instructor: Jeffrey S. Racine

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1 Instructor Contact information

- Instructor: Jeffrey S. Racine
 - Email: racinej@mcmaster.ca
 - Office: KTH 431
 - Office Hours (Zoom): Tu/Th 12:15-12:45 PM
 - Zoom Link: <https://mcmaster.zoom.us/j/98761126109>
 - McMaster Website: <https://experts.mcmaster.ca/display/racinej>
- Lecture Time & Location: Tu/Th 10:30-12:00, KTH306A

2 Course Description

This course is designed to introduce you to a set of advanced statistical tools that are routinely used for the analysis of economic data. We shall focus on nonparametric methods of estimation and inference, namely i) nonparametric estimation (i.e., with respect to functional form assumptions) and ii) nonparametric inference (i.e., with respect to distributional assumptions). Material will be taken from a variety of sources, with required readings being announced in class. Applications will be emphasized throughout. This course emphasizes the use of mathematics, statistics, and computers, and uses generative AI to enhance the development of coding skills using the [R](#) language and [RStudio](#) IDE.

3 Class Format

The format will be delivered via traditional in-person lectures. See [A2L](#) for additional details.

Office hours will be held virtually via Zoom. See the information above and also the announcement on [A2L](#) for additional details.

4 Course Requirements

- Problem sets.
- Midterm examination(s).
- Term paper.
- Final examination.

5 Missed Work (MSAF)

If you fail to write an exam or to turn in an assignment by its due date, you will receive a grade of zero for the missed work. The only exception will be for documented illness or emergencies subject to the following terms and conditions:

1. You have provided prior notification to the Instructor (details below).
2. You have submitted an MSAF (details below).
3. You have completed the work prior to the rescheduled due date (details below).

Note that, *prior to the scheduled time of the examination or assignment*, you must notify the Instructor *via email* that you are seeking an extension and your email *must include* a brief explanation of your circumstances. *If you have submitted an MSAF and you have been granted an extension by the Instructor*, the Instructor will notify you via email of the extension deadline for submitting the work. The work must be completed as soon as possible after the missed work date, typically within a day or two, and you *cannot* transfer weight to another course component (such as the final exam).

Be aware that the “MSAF (Self-Report)” guidelines differ from the “MSAF (Administrative Report)” guidelines (the former is for illness or emergencies lasting a day or two, the latter if your absence is more serious and you need to extend it beyond three days). For additional information see [Policy on Requests for Relief for Missed Academic Term Work](#) and [Missed Academic Work \(Office of the Provost & Vice-President \(Academic\)\)](#).

6 Course Materials

- Most course material is accessible via [A2L](#), which serves as the main conduit for course content.
- The course textbook is Racine, J. (2019), *An Introduction to the Advanced Theory and Practice of Nonparametric Econometrics (A Replicable Approach Using R)*, Cambridge University Press, ISBN 9781108483407.
- Optional reference textbook: Li, Q. and J. Racine (2007), *Nonparametric Econometrics: Theory and Methods*, Princeton University Press, ISBN: 9780691121611.
- Optional reference textbook: Silverman, B.W. (1986), *Density Estimation for Statistics and Data Analysis*, Chapman and Hall.
- The statistical software required for completing assignments is non-commercial, open source, and freely downloadable (we will use R, RStudio, and \TeX).

7 Evaluation

You will be evaluated on the basis of your performance on two mid-term examinations, assignments, and a final comprehensive examination. The weights assigned to each are as follows:

Component	%
Assignments	20%
Mid-Term Examination(s)	20%
Term Paper	20%
Final Examination	40%

The grades are assigned as follows:

Mark	Grade
90-100	A+
85-90	A
80-84	A-
77-79	B+
73-76	B
70-72	B-
67-69	C+
63-66	C
60-62	C-
57-59	D+
53-56	D
50-52	D-
0-49	F

8 Academic Integrity

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. It is your responsibility to understand what constitutes academic dishonesty.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at secretariat.mcmaster.ca/university-policies-procedures-guidelines

The following illustrates only three forms of academic dishonesty:

- plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
- improper collaboration in group work.
- copying or using unauthorized aids in tests and examinations.

9 Authenticity/Plagiarism Detection

Some courses may use a web-based service [Turnitin.com](https://turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to [Turnitin.com](https://turnitin.com) or via an online learning platform (e.g. [A2L](#), etc.) using plagiarism detection (a service supported by [Turnitin.com](https://turnitin.com)) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, other software, etc.). For more details about McMaster's use of [Turnitin.com](https://turnitin.com) please go to www.mcmaster.ca/academicintegrity.

10 Courses With An On-Line Element

Some courses may use on-line elements (e.g. email, [A2L](#), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster email accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

11 Online Proctoring

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

12 Conduct Expectations

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the [Code of Student Rights & Responsibilities](#) (the “Code”). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, whether in person or online.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students’ access to these platforms.

13 Academic Accommodation Of Students With Disabilities

Students with disabilities who require academic accommodation must contact [Student Accessibility Services](#) (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a Program Coordinator. For further information, consult McMaster University’s [Academic Accommodation of Students with Disabilities policy](#).

14 Academic Accommodation For Religious, Indigenous Or Spiritual Observances (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the [RISO](#) policy. Students should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar’s Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

15 Copyright And Recording

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, including lectures by University instructors. The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

16 Extreme Circumstances

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, [A2L](#) and/or McMaster email.

17 Faculty of Social Sciences email Communication Policy

Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all email communication sent from students to instructors (including TAs), and from students to staff, must originate from the student's own McMaster University email account. This policy protects confidentiality and confirms the identity of the student. It is the student's responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

18 Course Modification

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

19 Generative AI: Some Use Permitted

Students may use generative AI when completing assignments and the term paper in this course so long as the use of generative AI is acknowledged and the student's own work is clearly identified. The use of generative AI is not permitted in any other form of assessment (e.g., exams, quizzes, tests, etc.) unless explicitly allowed by the instructor. With the exception of assignments and the term paper under the terms given above, the use of generative AI in any other form of assessment without explicit permission will be considered academic dishonesty and will be subject to the penalties outlined in the Academic Integrity Policy which can be found at www.mcmaster.ca/academicintegrity.