

Introductory Mathematics for Economics I

AP/ECON 1530 3.0 – Fall 2022 Section C

Instructor Information

Robert J. McKeown, PhD, CFA
Assistant Professor, Teaching Stream
Department of Economics, York University
Office: Vari Hall 1052 – Email: mckeow99@yorku.ca

Course Description

Mathematics puts the M in STEM. Math is the gateway to science, technology, and engineering – the STE in STEM. Since mathematical economics is a STEM field, it should be no surprise that an BUEC/ECON/FBEC major needs strong math skills to succeed. These skills include an understanding of algebra, multiplicative reasoning, word problems, and calculus, all of which are contained in this course. You can expect a *review* of these skills through practice and application to economic concepts. Note the word “review” – the Department of Economics expects that you previously developed strong algebra skills. If you have not taken calculus in High School or if you have been out of school for some time, you should expect to devote a considerable amount of your time to studying ECON1530 (more than 3 hours of homework a week). Also consider transferring to MATH1510 – the Fundamentals of Mathematics if you require additional preparation.

Requirements and Exclusions

Prerequisite: Grade 12U Advanced Functions or equivalent.

Co-requisites: AP/ECON 1000 3.00 or AP/ECON 1010 3.00, or equivalent.

Recommended completion: high-school calculus or equivalent OR MATH 1510 6.0C – Fundamentals of Mathematics.

Course credit exclusions: SC/MATH 1000 3.00, SC/MATH 1013 3.00, SC/MATH 1300 3.00, SC/MATH 1505 6.00, SC/MATH 1513 6.00, SC/MATH 1530 3.00, SC/MATH 1550 6.00, GL/MATH/MODR 1930 3.00. Note: Acceptable course substitutes are available in the Calendar.

Why You Should Work Hard in ECON1530

- “Students who complete Algebra ... are more than twice as likely to graduate from college...”*
- “A strong grounding in ... Algebra correlates powerfully with ... earning in the top quartile of income from employment.”†
- Research showed that math skills are highly correlated with success in economics.

*U.S. Department of Education, “Foundations for Success: The Final Report of the National Mathematics Advisory Panel,” 2008

†ibid.

- “International students have characteristics that make them attractive to employers... they are twice as likely as a domestic student to have studied engineering and 2½ times as likely to have studied math or science.”
<https://www.theglobeandmail.com/canada/article-international-students-visa-delays/>
- Math can be learned through practice – just because you can’t solve a problem now does not imply you never will.

Course Format

This course is a flipped or blended classroom, which means lecture videos are watched outside class time. Class time focuses on applying the concepts from these videos to economic problems.

Course materials will be posted on the ECON1530 eClass/eClass page: <https://eclass.yorku.ca/eclass>.

Please review the technology requirements and FAQs for eClass.

Here are some useful links for student computing information, resources and help:

<http://elearning-guide.apps01.yorku.ca/>, <https://uit.yorku.ca/student-services/>,

<https://uit.yorku.ca/wp-content/uploads/sites/3/2012/02/Zoom@YorkU-User-Reference-Guide.pdf>

Required Technology and Textbook

1. You will need a **laptop** in good working order to complete tests and quizzes. A tablet or smartphone is insufficient.
 - You can borrow a laptop from York U here:
<https://www.yorku.ca/bettertogether/2020/03/19/register-to-borrow-a-laptop-from-york-u/>
2. You will need a reliable internet connection to access eClass. To determine Internet connection and speed, there are online tests, such as Speedtest, that can be run.
3. **Required Textbook:** – “Essential Mathematics for Economics Analysis”, Knut Sydsæter , Peter Hammond, Arne Strøm and Andrés Carvajal, 6th Edition, Pearson Education Limited, 2021.

Many of the lecture notes and class practice problems are derived from this textbook. Homework problems are at the back of each section and chapter. Solutions are at the back of the book. These problems will be similar to quiz, test, and exam questions. Students who practice these problems outperform those who do not.

4. **ALEKS Math 6-week Subscription** – Contains many practice problems, quizzes 1-3, and term test 1. Algebra skills are highly correlated with undergraduate success in economics, and ALEKS can help you learn. The cost of a six-week subscription is \$39.00 (no tax). A subscription for the entire semester (18 weeks) is \$79.00 but is not required. You can purchase a subscription at the York U bookstore https://www.bookstore.yorku.ca/sell_access_codes.asp. Scroll down until you see ECON1530.

Why Are We Using ALEKS?

Assessment and LEarning in Knowledge Spaces (ALEKS) is a web-based, artificially intelligent assessment and learning system. ALEKS uses adaptive questioning to quickly and accurately determine

exactly what you know. ALEKS then instructs you on the topics you are most ready to learn. As you work through our course, ALEKS periodically reassesses you to ensure that topics learned are also retained. Questions are free-form – not multiple-choice. ALEKS also provides the advantages of one-on-one instruction, 24/7, from virtually any Web-based computer for a fraction of the cost of a human tutor. Research shows that students who do well on ALEKS also do well at university. Other research shows that strong algebra strongly predict success in economics. In 2019, ALEKS won three prestigious SIIA CODiE Awards for (i) Best College and Career Readiness Solution, (ii) Best Summative Assessment Solution, (iii) Best Mathematics Instructional Solution.

https://www.aleks.com/about_aleks/overview

Office Hours

Wednesdays, 3:00pm - 4:00pm EST online via Zoom starting September 14.

Link to Office Hours (also available on eClass):

<https://yorku.zoom.us/j/94014100790?pwd=RUUrKy9nRUtVN2RxTmVBNmhRSDA0dz09>

Meeting ID: 940 1410 0790

Passcode: 652797

Note: office hours will not be held during reading week or the final exam period. However, you may email me to request an appointment at any time.

Email Etiquette

If you have a content question (ie. math problem), please ask me during office hours. *Generally, I do not respond to questions about course content via email.* In the event that an e-mail communication is needed, please use your York U e-mail account (the “york.ca” account) or whichever email account is tied to your eClass login. E-mails from other accounts may not reach my inbox, and it is easier for me to help you if I can identify you quickly. You should address me as “professor” and use professional, polite language. Please include the (i) course code and section number in the subject line, (ii) your full name as it appears on eClass/eClass, (iii) your preferred name, and (iv) your student number. For e-mails requiring a reply, **I will reply within three business days**. If I fail to do so, assume I forgot and remind me via email or in-person.

Evaluations

	Date	Time	Details	Grades: Best of	
				Option A	Option B
Term Test 1	Oct 6, 8:30 AM	90 mins	ALEKS	25%	25%
Term Test 2	Nov 17, 8:30 AM	90 mins	in-Class	25%	30%
Post-Course Survey	Dec. 1	–	online	1%	1%
Quizzes	Weekly	30 mins	ALEKS & eClass	6%	6%
In-Class Activities	Weekly	–	iClicker, eClass	10%	0%
Final exam	Exam period: Dec 9-23	120 mins	Exam Room	33%	38%

1.0% Bonus mark! Spend 6 hours or more on ALEKS between Sep 8 and Sep 14.

Note: See <https://registrar.yorku.ca/enrol/dates/2022-2023/fall-winter> for other important dates such as the last day to drop a course. **Please make yourself available during the Exam Period.** Flights are not a legitimate reason for missing a university exam.

- The first three quizzes are written on ALEKS and consist of ALEKS math problems. You will be asked to complete the **ALEKS initial knowledge check before you can complete any quiz**.
- Quizzes are 5-10 questions. You have 30 minutes to complete the quiz once you begin.
- Term Test 1 will be written on ALEKS in-class. You will need a laptop to complete test 1 in-class. If you do not have a laptop, you have two options:
 1. Borrow a laptop from York U. York has more than 1,500 laptops available to students.
 2. Write term test 1 in a computer lab. Space is booked in rooms DB 2114, 2116, 2118 (Victor Phillip Dahdaleh Building).
- Term Test 2 and the final exam will be written on paper. On both you can expect short, written-answer questions. The final exam will be **cumulative** – you must not forget what you have learned!
- Quizzes are five to ten questions. You have 30 minutes to complete the quiz once you begin.

Missed tests

To be eligible for accommodation, please email me (politely) with your reason. No permission is ever given to a student to write a test or exam in advance of its scheduled date.

- **Quizzes and participation** have zero-tolerance – these cannot be replaced or re-scheduled. Instead, your lowest score is dropped from the calculation of your final grade.
- **Term Test 1:** there will be a make-up test on Tuesday, October 11 at 8:30 AM EST. If you miss both Term 1 and makeup test 1, you will receive a grade of zero for term test 1.
- **Term Test 2:** there will be a make-up test on Tuesday, November 22, at 8:30 AM. If you miss both Test 2 and makeup test 2, you will receive a grade of zero for term test 2. Note that the format of this make-up test may differ from the original.

Note these times are tentative and subject to change.

- **Final Exam:** There will be **no deferments offered for missed final exams** except under extremely unusual circumstances. Anyone wishing to write a deferred final exam will be required to formally petition for such.

<https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/departments-policies/deferred-standing/>

Frequently check eClass for the latest information on tests, make-up tests, and the final exam.

Religious accommodation is available. You must notify the instructor no later than **seven days** prior to the test. If you were too ill to write the test, notify the instructor via email within **five days** of the test.

Grading

Historically, the average grade across all sections of ECON1530 is a C+ (65-69 on the York scale). "Curving" your grades is at the discretion of the instructor and the Department of Economics. This curve may increase or decrease your grade.

Term Test Grade Appeals

On eClass, you will find a re-grade request form. You will need to explain, in writing, why you deserve additional marks. Simply stating you deserve more marks is not sufficient. You must explain why your answer is correct. Your request may or may not be approved. Note that I will regrade your entire test! So, your overall grade may go up or down.

In-Class Activities

This course is a flipped (or blended) classroom.

- You watch lecture videos outside class time.
- You work on assigned problems during class time.

This format has the following advantages:

- work with and learn from your classmates,
- work on problems in the presence of an instructor who can assist you,
- receive timely feedback on your progress.

To be successful in a flipped classroom, you must watch the lecture videos before class. Otherwise, you won't understand what is happening during class.

Participation Grades

- Each individual class will be graded. The lowest grade will be dropped. The average of your remaining grades will be your participation grade for the course.
- Answer iClicker questions – your answers need not be correct.
- Complete quizzes and activities according to instructions. Points are awarded for completion and correctness.

Where to Find Help with ECON1530

PASS – Peer Assisted Study Sessions

ECON 1530 is a challenging course for students. Peer Assisted Student Success (PASS) sessions have been successfully implemented around the world as an effective strategy for success in such challenging courses. All students are strongly encouraged to attend weekly PASS sessions to foster their success in these courses. Research shows that students who attend PASS sessions regularly have a significantly higher success rate than those who do not.

<https://vanier.laps.yorku.ca/pass-sessions/>

SNACK – Student Numeracy Assistance Centre at Keele

The Centre has many useful resources including: workshops and drop-in peer tutoring. Content and schedule is available at:

<https://www.yorku.ca/laps/support/pass-program/>

Academic Honesty and Integrity

Course materials should only be used by students enrolled in this course. As a student in this course, you may not publish, post on an Internet site, sell, or otherwise distribute any of this work without the instructor's express permission. Unauthorized or commercial use of these materials is strictly prohibited. Third party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course, or fall under an exception or limitation in Canadian copyright law. Copying this material for distribution (e.g. uploading material to a commercial third-party website, or online sharing of course material with people outside of the course) may lead to a charge of misconduct under York's Code of Student Rights and Responsibilities and the Senate Policy on Academic Honesty. In addition, you may face legal consequences for any violation of copyright law.

As a student at York University, you have a responsibility to not only understand, but also play an important part in upholding the integrity of the academic experience. The Faculty of Liberal Arts and Professional Studies at York University supports the International Center for Academic Integrity's definition of academic integrity. That is, you will be committed to acting in all academic matters, even in the face of adversity, with honesty, trust, fairness, courage, respect and responsibility.

In this course, we strive to maintain academic integrity to the highest extent possible. Please familiarize yourself with the meaning of academic integrity by completing SPARK's Academic Integrity module at the beginning of the course

(<https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/>). Breaches of academic integrity range from cheating to plagiarism (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.). All instances of academic dishonesty in this course will be reported to the appropriate university authorities, and can be punishable according to the Senate Policy on Academic Honesty.

How can you demonstrate academic integrity?

- Respect the ideas of others: Your course work should represent your own knowledge and ideas. You should not falsely claim credit for ideas that are not your own, by presenting another's work as

yours. If you are quoting, paraphrasing, or summarizing another person's work in order to support your own ideas, identify the work and the author through proper citation practices. For more information about how to cite properly, use the Student Papers and Academic Research Kit (SPARK). You can improve your writing, research, and personal learning abilities through the Learning Commons.

- Respect your peers: Know when you are allowed to collaborate. Ask your instructor about what group work entails when it comes to the sharing of work. In test situations and assignments, don't steal or give answers to your peers. Cheating and aiding in a breach of academic honesty are both against York University's academic honesty policy. Specific to ECON1530, you can share answers with students in your breakout room, but you are not allowed to share with others.
- Respect yourself: When you act with integrity, you know that your work is yours and yours alone. You do not allow others to impersonate you on tests and exams. You do not buy or otherwise obtain term papers or assignments. You do the work. As a result, you know that you earned the grades that you receive, so you can be proud of your York degree. By acting with integrity in your course work, you are also practising a valuable professional skill that is important in all workplaces.
- Take responsibility: If you have acted in an academically dishonest way, you can demonstrate courage and take responsibility for your mistake. You can admit your mistake to your course instructor as soon as possible.

Students who engage in academic dishonesty can be subject to disciplinary action under the Senate Policy on Academic Honesty. **Your lack of familiarity with the Senate Policy and Guidelines on Academic Honesty does not constitute a defence against their application.** Some academic offences can also constitute offences under the Criminal Code of Canada, which means that you may also be subject to criminal charges.