

THE GEORGE WASHINGTON UNIVERSITY

Department of Economics

ECON 1001: PRINCIPLES OF MATHEMATICS FOR ECONOMICS

SUMMER 2017

Section 21: Mondays, Tuesdays, Wednesdays and Thursdays 3:30-5:00pm, Bell Hall 309

INSTRUCTOR

Eiji Goto [Pronunciation: A-gie Go-toe]

Office hours: Mondays 2:00-3:00pm, Tuesdays 2:00-3:00pm, Thursdays 2:00-3:00pm and by appointment, Monroe 374

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COURSE DESCRIPTION

Numeracy is as essential to becoming an active and thoughtful citizen as literacy. Principles of Mathematics for Economics is a course in college mathematics designed to prepare students for college instruction in principles of microeconomic and macroeconomic theory. It should also prepare students for instruction in business, social science and basic science courses that do not require knowledge of calculus. The instruction in basic college mathematics is standard but the examples and applications are chosen to emphasize topics necessary for success in principles of economic theory. **No calculators** will be used in the course. A more detailed list of topics is covered in the Course Outline at the end of this syllabus. By the end of this course, students will be able to:

1. Identify and have a working knowledge of the basic concepts and terminology of microeconomics and macroeconomics
2. Be proficient in the multiplication and division of integers, fractions and decimals to solve economics- and business-related word problems
3. Understand and use fractions, percent, proportions and decimals as applied to economic concepts
4. Understand order of operations
5. Understand, solve and apply equations
6. Understand exponents and polynomials
7. Solve systems of linear equations in two variables and understand their application to the Marshallian cross diagram
8. Use simple linear models to solve economic word problems
9. Scaling and plotting graphs given a table of data or equations
10. Understand graphs of equations in two variables

COURSE PREREQUISITE

High school algebra (Algebra I) and basic geometry

COURSE MATERIALS (*links provided on Blackboard under Course Materials*)

TurningPoint Audience Response System

Course Policies

- **Excused Absences and Required Documentation**

The following are considered absences that may be excused, provided adequate documentation is submitted according to the time schedule. In cases of emergency, I may accept documentation after the absence.

- University-designated religious holidays: students are to notify faculty during the **first week** of the semester. Please see the university policy posted on Blackboard.
- Athletics: all athletes **MUST** submit two copies of a green Athletics Department form with dates of absence **at least one week** before the absence.
- University-related events: all participants must submit an appropriate letter from the organizing group. The letter must be provided at least **one week** before the absence.
- Illness or hospitalization: signed note from doctor (date of the visit as well as doctors contact info must be on document) stating the student is too ill to attend classes and requires bed rest for a stated time (with dates).
- Death of relatives: a copy of the obituary or a funeral notice must be provided.

- **Office Hours**

If you do not understand the material being covered in class, it is your responsibility to come see me. No appointments are required during my office hours.

- **Blackboard**

Blackboard will be used on a regular basis to post assignments, answer keys, announcements, and documents as well as your grades. Get into the habit of checking Blackboard everyday.

- **ALEKS Placement Exam**

All students need to complete the ALEKS placement exam at both the beginning AND end of the semester. Please go to <http://go.gwu.edu/placementexam> to take the exam.

CLASS TECHNOLOGY POLICY

Laptops are not allowed in class. Mobile devices may only be used during class when answering questions on the TurningPoint application. Mobile devices must be put away and out of sight at all other times during class. Please remember to keep your cell phones on silent during class.

INDEPENDENT, OUT-OF-CLASS LEARNING

The average minimum amount of independent, out-of-class learning expected per week: as per university policy, over these 6 weeks for our 3-credit hour course you should average a minimum of 10 hours of independent learning per week in addition to the 6 hours per week of direct instruction. The actual amount of studying required depends on many factors including your background preparation, your study skills, and your target grade. Success in this class is highly likely to require substantially more independent learning. More information about GW's credit hour policy can be found in the university bulletin: <http://bulletin.gwu.edu/university-regulations/>.

GRADES

- **In-class Turning Point Questions**

We will be using the audience response system, Turning Point. You will be required to

provide answers to questions in class based on material covered that day. You will be graded on participation as well as the correctness of your answer. You may purchase a clicker at the GW bookstore or download the TurningPoint application on a mobile device. Please see the class technology policy stated above. You are responsible for bringing your chosen device to each class. If you are present in class, but do not have your device, you will receive a zero on questions asked that day.

- **Homework**

You will likely have homework assigned after each class. Homework must be submitted by the beginning of class on the due date. **Calculators are not permitted** on the homework. DEADLINES WILL NOT BE EXTENDED FOR ANY REASON. Answer keys to the homework will be posted on Blackboard after class on the due date. The lowest homework score will be dropped at the end of the semester to accommodate any absence or unforeseen event you may experience. I advise that you begin working on homework as soon as possible in case something unexpected occurs in your personal life.

- **Quizzes**

There will be 4 cumulative quizzes over the course of the semester. The quizzes will be administered at the beginning of class on the designated day; see the tentative schedule in the Course Outline at the end of this syllabus. You will have thirty minutes to complete each quiz. **Calculators are not permitted** on the quizzes. NO MAKEUP QUIZZES WILL BE GIVEN except for excused absences. If you anticipate an excused absence due to athletic travel, a prolonged illness, etc. then please contact me as soon as possible with appropriate documentation.

- **Midterm Exam**

The midterm exam is cumulative and will be given in class on the date specified in the Course Outline at the end of this syllabus. **Calculators are not permitted** on the exam. THERE WILL BE NO MAKEUP EXAM. If you have an excused absence granted, the midterms weight in grade determination will be added to the final exam. If you do not have an excused absence, you will receive a zero on the midterm.

- **Final Exam**

The final exam is cumulative. **Calculators are not permitted** on the exam. Finals must be taken on the day and time specified by the Course Outline at the end of this syllabus. Make-ups will **NOT** be offered to individual students to accommodate their travel plans.

- **Grading Criteria:**

Grades will be based on the following:

In-class Turning Point Questions	5%
Homework	15%
Quizzes (cumulative)	20%
Midterm (cumulative)	30%
Final Exam (cumulative)	30%

- **Grading Scale:**

Generally, grades are distributed as follows:

A	93% and above
A-	90% - 92%
B+	87% - 89%
B	84% - 86%
B-	80% - 83%
C+	77% - 79%
C	74% - 76%
C-	70% - 73%
D+	67% - 69%
D	64% - 66%
D-	60% - 63%
F	59% and below

- **Grading problems**

Please report it in writing or in person to your instructor.

- **GW Code of Academic Integrity**

This should be a no-brainer. Think carefully about the consequences before making a wrong choice. These four years at college are your opportunity to build a solid foundation for the expertise you will need for a successful career. Use your smarts to focus on gaining deep knowledge in your area of interest, not on scamming the system.

Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information. For the remainder of the code, see: <http://www.gwu.edu/~ntegrity/code.html>.

UNIVERSITY SUPPORT OUTSIDE THE CLASSROOM

- **DISABILITY SUPPORT SERVICES (DSS) 202-994-8250**

Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at Rome Hall Suite 102, to establish eligibility and to coordinate accommodations. For additional information please refer to: <http://gwired.gwu.edu/dss/>.

DSS students who require accommodations will take all quizzes and exams at a location specified by DSS. To receive accommodations at DSS, students **MUST** fill out the required online form **at least one full week before** the date of the quiz. Students who fail to do so will not receive accommodations in the classroom.

- **UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300**

The University Counseling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:

- crisis and emergency mental health consultations
- confidential assessment, counseling services (individual and small group), and referrals

<http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices>

SECURITY

In the case of an emergency, if possible, the class should shelter in place. If the building that the class is in is affected, students should follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.

Tentative Course Outline:

The weekly coverage may change as it depends on the progress of the class.

Week	Contents				
	Monday	Tuesday	Wednesday	Thursday	Important dates
Week 1 (7/5-7/9)			Introduction Basic Operations	Multiplication, Division, Factoring, and Prime Numbers	
Week 1-2 (7/10-7/16)	Fraction, Decimals and Percentages	Quiz 1 (cumulative) Fraction, Decimals and Percentages	Decimals, Fractions or Proportions and Percent	Order of Operations	7/11(Tuesday) (last day to add a class via GWeb or to drop a class via any means) 7/14(Friday) (last day to add class via RTF-EZ)
Week 2-3 (7/17-7/23)	Large Numbers and Scientific Notation	Quiz 2 (cumulative) Understanding Data	Time Value of Money	Time Value of Money	
Week 3-4 (7/24-7/30)	Review	Midterm (cumulative)	Plug and Chug	Plug and Chug	7/28(Friday) (last day to withdraw from a class with a grade of 'W' using the RTF-EZ or to change grade mode with Dean's permission) 7/30(Sunday) (last day to withdraw from a class with a grade of 'W' using GWeb)
Week 4-5 (7/31-8/6)	Equations for Fun and Profit	Quiz 3 (cumulative) Equations for Fun and Profit	Graphing Linear Equations	Graphing Linear Equations	
Week 5-6 (8/7-8/13)	Two Linear Equations Meet	Quiz 4 (cumulative) Two Linear Equations Meet	Solving Word Problems	Solving Word Problems	
Week 6 (8/14-8/15)	Review	Final Exam (cumulative)			