

# ECO 5114: Microeconomic Analysis

## Syllabus

Dr. Thomas Knight  
Office: MAT 224  
Office Hours: R 4:00-5:00pm

Course Time: T/R 1:55-3:50pm  
Course Location: MAT 114  
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**Required Text:** “Microeconomics: Theory and Applications with Calculus, 4<sup>th</sup> edition”  
by Walter Nicholson and Christopher Snyder (Cengage, 2017)

**Required Supplies:** 1) Straightedge (i.e., a ruler), 2) Colored Pencils, and 3) Graph Paper

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### **COURSE DESCRIPTION AND OBJECTIVES**

This course will cover Microeconomic Theory using calculus. We will start by analyzing the formulation of economic models while paying particular attention to the importance of their underlying assumptions. Then, we will cover in great detail concepts related to consumer and individual choice and demand, including the analysis of preferences and utility, utility maximization and choice, income and substitution effects, and demand relationships between distinct goods. Next, we will examine concepts related to firms’ profit maximization and market supply, with special emphasis on production functions, cost functions, and market structure. In the last part of the semester, we will introduce the concepts of risk and information asymmetries.

After completing this course, you will be able to: (1) Describe the assumptions of different economic models and explain how relaxing each assumption would affect the model’s solution, (2) Construct and solve utility and profit maximization problems that characterize unfamiliar, real-world decision-making scenarios, (3) Explain how market structure and product characteristics impacts firms’ production and pricing decisions, and (4) Introduce risk and uncertainty into foundational economic models.

### **STUDENT RESPONSIBILITIES** --*carefully read the syllabus for unique features of this course*

- 1) Continued enrollment in this course is equivalent to acceptance of all stated responsibilities, policies, and due dates. If there is anything that is unclear, talk to me *immediately*. Waiting until the end of the term often results in less favorable outcomes.
- 2) I ask a number of directed questions during the lecture period of the course. Students are selected at random to answer questions based on the required readings and lecture material.
- 3) Students are expected to attend regularly and participate actively in this course. It is assumed that you have read the assigned material before attending class and are prepared to answer questions based on the readings.
- 4) Students are expected to complete 6 analytic problem sets. These problem sets relate to the topics of the preceding lectures and are intended to offer you practice with the relevant solution techniques. In some cases, questions offer important extensions of the material covered in class. All problem sets are due at the beginning of class (i.e., 1:55pm) on the due date; late problem sets (even ones that are only a few minutes late) will not be accepted for partial credit. *See Page 2 for a more thorough explanation of problem sets.*
- 5) Students are expected to arrive on time and conduct themselves professionally during each lecture. Any lapse of appropriate conduct during class may result in a final course grade reduction of one letter grade.
- 6) There are three noncumulative, in-class exams: Midterm Exam 1 (February 8), Midterm Exam 2 (March 7), and Midterm Exam 3 (April 18).

### COURSE RESOURCES (AND HINTS FOR SUCCESS)

- Students are expected to read the assigned textbook chapters. The lectures will mostly, but not entirely, mirror the assigned textbook readings. The textbook essentially provides an alternative explanation of the core models and concepts covered in the course.
- The problem sets are the greatest resource you have. These problem sets provide an almost-comprehensive review of the relevant course material and solution techniques.
- Superficial cramming will not lead to success; keeping up with the material is essential. After each lecture, review your notes, and test whether you understand a particular concept. You may, for example, take an example or worksheet problem from class in which I examined the effect of an income increase on a consumer's equilibrium consumption bundle and attempt to identify the effects of an income decrease. These thought exercises increase your exposure to the material and sharpen your ability to apply the analytic tools covered in class.
- As with any "tools" course (e.g., mathematics), the only way to learn the material is to practice it.
- Attend class regularly. It is almost impossible to pass this class without regular attendance.

### GRADING POLICY AND SCALE

- Grades are calculated as follows: Analytic Problem Sets (25%), Midterm Exam 1 (25%), Midterm Exam 2 (25%), Midterm Exam 3 (25%).
- Problem set extensions and make-up exams must be arranged before the relevant submission or exam date/time and will only be offered for absences that are explicitly excused by the [UF Attendance Policy](#). Keep in mind that your academic obligations *always* take precedence over personal and social commitments.
- Unexcused absences from in-class exams or failing to turn in a problem set will result in a zero.

92.00-100	A	78.00-79.99	C+
90.00-91.99	A-	72.00-77.99	C
88.00-89.99	B+	70.00-71.9	C-
82.00-87.99	B	65.00-69.99	D
80.00-81.99	B-	0-64.99	E

A grade of C or higher is required to apply this course to the M.A. in Economics requirements. A grade of B or higher is required for combined degree students who plan to apply this course to both undergraduate and graduate requirements. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

---AND---

<http://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

### ANALYTIC PROBLEM SET INFORMATION AND GUIDELINES

- All problem sets are due at 1:55pm. Late assignments will not be graded.
- You are required to demonstrate all of your work and provide thorough explanations to receive credit. Attach all of your work on additional sheets of paper if necessary. The problem sets may not have enough space for you to provide all of your work and the required explanations.
- You **MUST** draw accurate and legible graphs. Poorly drawn graphs will **NOT** be graded. When graphing, use a straightedge (i.e., a ruler) and the appropriate colored pencils. The directions often instruct you what color to use for a particular curve. You are expected to follow those instructions.
- You may work in groups; in fact, I highly recommend it. You are, however, required to submit individual problem sets for grading. Copying another student's work is not permissible.
- Keep your problem sets when I hand them back. Some questions refer to others from past sets, and they provide a valuable resource for exam preparation.

### ATTENDANCE POLICY

Students are expected to arrive on time and conduct themselves professionally during each lecture. Irregular attendance and/or tardiness will most likely result in substantially reduced course performance, as well as reflect poorly upon your commitment to this course.

Students must arrive on time to class. Arriving late is disruptive to your classmates and the instructor. Routinely arriving late sends the message that you do not prioritize your education and/or that you do not have important time-management skills.

### GENERAL COMMENTS ON WELLNESS AND SUCCESS

If you are a student with special needs and you require additional resources to participate successfully in this course, please contact me during the first week of classes. The Disability Resource Center may provide special accommodations for students. Once you obtain documentation from the DRC, please forward it to me and accommodations will be arranged.

College is an exciting learning experience and a unique opportunity for personal growth. It can, however, also be a stressful and difficult transitional period. If you are ever having general issues with your coursework *in any course* or trouble in your personal life, please seek help from myself or another faculty member. I also encourage you to utilize the *FREE* and *ANONYMOUS* services of the UF Counseling and Wellness Center: <https://counseling.ufl.edu>

### ACADEMIC HONESTY

You are expected to abide by the University's rules for academic honesty as outlined in the UF Student Honor Code (<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>). All suspicious evidence of cheating, plagiarism, making false statements, and any other violation of these rules will be reported to the Dean of Students Office. Additionally, I will advocate for the strictest of available sanctions (inc. dismissal from the University of Florida) for any student who is found responsible for violating these rules.

It is important to note that cheating and plagiarism are not the only forms of academic dishonesty. "Making a false or misleading statement for the purpose of procuring an improper academic advantage" is also a violation of the UF Student Honor Code. This includes making false statements to your instructor and/or presenting forged documents (e.g., doctors' notes). I verify all suspicious claims and documents, for example, by contacting a student's medical provider or by reviewing a student's UF systems connection data.

While collaboration on the problem sets is permitted, any work that you submit for evaluation and grading should be your own. Collaboration on exams is strictly prohibited.

### NOTE ON END-OF-TERM COURSE EVALUATIONS

At the end of each term, you have the ability to evaluate the quality of each of your courses and the effectiveness of your instructors. I encourage you to take this opportunity seriously and to provide serious and informative feedback. Personally, I am always trying to improve my courses – tweaking them bit-by-bit each term – and student feedback is essential to making real improvements. As the term nears an end, I will discuss this issue (numerous times) in lecture, as I believe the high quality of your education depends on your constructive criticism and affirming support. You can access end-of-term course evaluations at: <https://ufl.bluera.com/ufl/>

## COURSE OUTLINE (AND ASSIGNMENT SCHEDULE)

- L1    January 9    Syllabus  
Introduction to Economic Modelling  
*Nicholson and Snyder, Chapter 1*
- L2    January 11    Introduction to Constrained Optimization
- L3    January 16    Introduction to Constrained Optimization
- L4    January 18    Preferences and Utility  
*Nicholson and Snyder, Chapter 3*
- L5    January 23    Utility Maximization and Choice  
*Nicholson and Snyder, Chapter 4*  
Problem Set 1 due at the beginning of class (1:55pm).
- L6    January 25    Utility Maximization and Choice *continued*  
*Nicholson and Snyder, Chapter 4*
- L7    January 30    Demand Relationships among Goods  
*Nicholson and Snyder, Chapter 6*
- L8    February 1    Demand Relationships among Goods *continued*  
*Nicholson and Snyder, Chapter 6*
- L9    February 6    Exam Review  
Problem Set 2 due at the beginning of class (1:55pm).
- February 8    MIDTEM EXAM 1
- L10   February 13    Income and Substitution Effects  
*Nicholson and Snyder, Chapter 5*
- L11   February 15    Income and Substitution Effects *continued*  
*Nicholson and Snyder, Chapter 5*
- L12   February 20    Labor Supply  
*Nicholson and Snyder, Chapter 16*
- L13   February 22    Production Functions  
*Nicholson and Snyder, Chapter 9*  
Problem Set 3 due at the beginning of class (1:55pm).
- L14   February 27    Cost Functions  
*Nicholson and Snyder, Chapter 10*  
Problem Set 4 due at the beginning of class (1:55pm).
- L15   February 29    Cost Functions *continued*  
*Nicholson and Snyder, Chapter 10*
- L16   March 5    Exam Review  
Problem Set 5 due at the beginning of class (1:55pm).

<u>March 7</u>	MIDTEM EXAM 2
<u>March 12</u>	NO CLASS: SPRING BREAK
<u>March 14</u>	NO CLASS: SPRING BREAK
L17 <u>March 19</u>	Profit Maximization <i>Nicholson and Snyder, Chapter 11</i>
L18 <u>March 21</u>	Profit Maximization <i>continued</i> <i>Nicholson and Snyder, Chapter 11</i>
L19 <u>March 26</u>	Partial Equilibrium Competitive Model <i>Nicholson and Snyder, Chapter 12</i>
L20 <u>March 28</u>	Partial Equilibrium Competitive Model <i>continued</i> <i>Nicholson and Snyder, Chapter 12</i>
L21 <u>April 2</u>	Market Failures <i>Nicholson and Snyder, Chapter 18</i>
L22 <u>April 4</u>	Market Failures <i>continued</i> <i>Nicholson and Snyder, Chapter 18</i>
L23 <u>April 9</u>	Externalities and Public Goods <i>Nicholson and Snyder, Chapter 19</i> Problem Set 6 due at the beginning of class (1:55pm).
L24 <u>April 11</u>	Externalities and Public Goods <i>continued</i> <i>Nicholson and Snyder, Chapter 19</i>
L25 <u>April 16</u>	Exam Review
<u>April 18</u>	MIDTEM EXAM 3