

**ECO100B MICROECONOMICS B**  
**(Product, Cost, and Perfect Competition)**  
**UNIVERSITY OF CALIFORNIA AT SAN DIEGO**  
**SUMMER TERM I 2014**  
**SYLLABUS**

**Professor:**

Dr. Michael Noel:                      Office: Econ Annex (However, office hours will be held in  
Warren Lecture Hall 2111)  
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**Teaching Assistants:**

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See the Schedule of Classes for locations of lectures, sections, and the final exam.

**The Course**

This is the second course in the upper division microeconomics sequence. In the sequence, we revisit the supply and demand model from the micro principles course but do so in a more rigorous and mathematical way. The second course in the sequence, 100B, analyzes the supply side. We work through the problem of cost minimization by firms using optimization techniques from multivariate calculus and ultimately derive cost curves and learn how to set quantities, prices, and other variables to maximize profits for firms engaged in competition under the assumption of perfectly competitive markets.

**Required Textbook**

Perloff, J. *Microeconomics Theory and Applications w/ Calculus*, 3<sup>rd</sup> Edition. Electronic materials and student accounts may be helpful, but not required.

**Required Videos**

Firm as a Production Technology  
<https://www.youtube.com/watch?v=J4hnx0117RI>

MRTS

<https://www.youtube.com/watch?v=w40tPhlfpVQ>

Welfare (Partial Equilibrium)

<https://www.youtube.com/watch?v=yGjN-BKcD3o&feature=youtu.be>

### **Grading**

There will be one term test (40% of the total grade) held in class on July 23<sup>rd</sup> and one final exam (60%) held on August 1<sup>st</sup> during the final exam period (check the class schedule for location). If you have other plans on those dates, do not take the course. The term test will cover about the first two and a half to three weeks of material. The only allowable reasons for missing a test or exam is a medically documented and unexpected illness on test day, a death in the family immediately preceding test day, or as permitted under the university policy on religious observances, disabilities, and UCSD athletics conflicts. There are no other exceptions so please check your schedules well in advance. For religious observances, disabilities, and UCSD athletic conflicts, notice must be given in the first week of class and alternate arrangements will be made. For illness, you must provide within one week of the test date a note from a physician stating that he/she evaluated you the same day as the test and that your illness reasonably prevented you from taking the test. For a death in the immediate family, provide documentation within two weeks.

If you do have a valid excuse to miss the term test, there will be no makeup and your grade will be based 100% on the final exam. If you miss the final exam, you will be given a grade of incomplete if your midterm is of passing quality and an F if it is not (as required under university grading policies). Therefore if you miss both exams, you will receive an F.

Note that if you start taking a test, the test counts. Under no circumstances can you have your test result not count (for illness or otherwise) after you have started taking it. Also note that the professor or t.a. cannot pre-approve requests to miss an exam for illness (for example, a student does not feel well but comes to the start of the exam to ask permission not to have to take it), but rather a note from a licensed physician is required.

The test and exam are closed book. You do not need blue books. Exams are 100% electronics free. No calculators (you do not need them), no cell phones, no iPods, no headphones, etc., no electronics of any kind in the exam hall. Also, no sunglasses or hats are permitted on test days. The final exam is cumulative, but heavily weighted to material from the second half of the course.

The marking scheme set out here cannot be amended for individual students. A student may not have a poor result excused, or make up for it by doing extra assignments, taking makeup exams or any other kind of additional work. All requests for exceptions must be denied. So please be sure to do the problem sets thoroughly and be prepared for the test and exam. We can help you before the tests, we cannot help you after.

Any regrade requests for the test or exam must be submitted in writing one week after the exam is returned to the class, with an explanation of the specific dispute written on a separate sheet of paper and attached to the front of the exam. The entire exam, start to finish, will then be regraded and your grade may go up or down. Be aware that exams, at the discretion of the professor, are photocopied prior to being returned to students the first time to eliminate the possibility of a student altering an exam (in serious violation of academic integrity rules) before resubmitting.

### **Problem Sets**

Problems set questions will be distributed every week and are not graded, due to the accelerated summer schedule. Therefore there is no due date, but we strongly suggest you attempt every problem prior to section. Selected problem questions are taken up in section. Experience has shown that simply reading the solutions without really working through the problems beforehand leads to a false sense of understanding and is a set up for disaster. Try to do the problems yourself first!

Exams draw very heavily from these problem sets and you want to understand how to solve these kinds of questions with confidence.

### **Academic Dishonesty**

There is a zero tolerance policy in this class for academic dishonesty. Any student found guilty of academic dishonesty will receive an F in the course. If you are unsure what constitutes academic dishonesty, please ask or consult with your college dean. In all cases, the student's name and test or exam will be immediately forwarded to the Academic Integrity Office, who will impose an additional penalty, up to and including expulsion from the university. Please do not even *consider* doing this. It is not worth it!

### **Some Friendly Advice**

Summer courses move very fast! We cover a week's worth of material every class. That's two weeks of material over a three day period (Monday – Wednesday). If you take Tuesday off, you may find yourself suddenly two weeks behind! It is imperative to stay on top of the material after every class. Several full days a week to study the course material is advised, more if your calculus is rusty. Begin studying for the test and exam starting on the first day of class. Do all the problem set questions well before section and before the solutions become available. By doing them in advance, you will know which ones you want to see taken up in section. The upper division 100 sequence moves **very** quickly and many students are not accustomed to the integration of calculus into economics problems. There are lots of resources available, experience shows that it is in your best interest to use them early and use them often! The professor and the teaching assistants are here to help.

### **Topics**

All readings from the Perloff text.

#### **1. Firms and Production**

Production Functions  
Variable and Fixed Inputs  
Law of Diminishing Marginal Returns  
Isoquants  
Marginal Products and Marginal Rate of Technical Substitution  
Returns to Scale

(Chapter 6)

## **2. Costs**

Economic vs Accounting Costs  
Short Run vs Long Run Costs  
Effects of Taxes

(Chapter 7)

## **3. Competitive Firms and Markets**

Competition in the Short Run and Long Run  
Profit Maximization  
The Supply Curve!

(Chapter 8)

## **4. Properties of the Competitive Model**

Zero Profits  
Producer Welfare  
Efficiency of Competition  
Policies that Shift Supply Curves

(Chapter 9)

## **5. General Equilibrium and Welfare**

Partial vs General Equilibrium  
Production and Trade  
Efficiency and Equity  
Role of Government

(Chapter 10)