Prerequisites

Typically, the economics prerequisite for this course is considered to be a one semester course at the Master's level in Microeconomics, such as our ECG 700. In that course we generally use a book such as Binger and Hoffman, Microeconomics with Calculus or Nicholson, Microeconomic Theory: Basic Principles and Extensions. However, if you have had a strong undergraduate background in economics and mathematics, this may be the appropriate course for you. Please talk to me if you have questions about whether this is the right course for you.

The mathematics prerequisite for this course is two semesters of Calculus, such as our MA 112 and MA 212 (a three semester series such as our MA 141, 241, 242 can obviously substitute). In addition, you should have had a Mathematics for Economists course such as our ECG 761 that covers optimization, linear algebra, and related topics that are useful to economists. The techniques developed there will be used extensively. If you haven’t taken such a course, you should be familiar with many of the topics in a book such as Chiang, Fundamental Methods of Mathematical Economics. This book is on reserve, and there are several other copies in the library stacks. This course will use mathematics when it is useful in understanding the economics, but I hope to avoid mathematics for its own sake.

Grading

There will be two exams during the semester, each of which will count for 28% of your grade. The final exam will count for 34% of your grade and will cover material from the entire course although material after the second exam will be somewhat emphasized.

Finally there will be three problem sets, one due slightly before each of the exams. Your grades on these will make up the final 10% of your grade. The homework problems will be handed out well in advance of their due date, and it will be most useful
to you if you do the relevant problems as we cover the material. I will try to mention the appropriate parts of the homework as we progress.

You may work together on the problem sets if you wish. However, each person must write up the answers individually. Remember, the problems are designed to help your understanding in preparing for the exams in the course. It would be a mistake if you just copied someone else's answers on the problem sets. The problem sets must be completed, or you may receive an incomplete in the course.

This might be a good time to form study groups. These will be useful in preparing for the comprehensive exams next summer. Copies of old comprehensive exams are available to you in the graduate program office and will be useful in preparing for those exams. When you look at the old comprehensive exams, you will notice that some of the problems seem to be more at the EC 301 or EC 505 level. This is intentional. Those exams test your economic intuition as well as your skill with economic tools. In preparing for the prelims you should be as comfortable with books such as Landsburg or McCloskey, as you are with the latest mathematical techniques. Since one of the main goals of this course is to provide access to the literature, the course is at a higher level. Nevertheless, don't neglect the intuition in studying for the prelims.

Course website

All of you who registered for this course were given a user id on the Unity system if you did not already have one. This will allow you access to the website for this class from anywhere you have Internet access. The address is:

http://courses.ncsu.edu/ecg701/lec/001/

It is also possible to click your way to the site by going to:

http://courses.ncsu.edu

Then click on: ECG Then click ECG 701. Then click on Home Page under Links

Either way that you get there, you will find copies of this syllabus and homework assignments, some background information, copies of any visuals used in class, and (after you have handed in the homework assignment) detailed answers to the homework problems. If you had trouble on any of the homework problems, please use these to help your understanding. Even if you received full credit, you may find it useful to look at the answers. Sometimes I provide alternative ways of solving a problem or extensions to the solution.

If I need to get an announcement to you between classes, I will use the e-mail address that you have listed with the university. Make sure the university has the e-mail address that you actually use. Instructions on how to check/change the email address are at the bottom of the class webpage. I do not anticipate using mass e-mail often, but you should check your e-mail regularly.

References

The required text for the course is Varian, Microeconomic Analysis, 3rd edition. (If the copy you are using is from an earlier printing of the 3rd edition, there is a list of corrections on the class website.)
The following books are on reserve in the D.H. Hill Library Reserve Room. (They are on 24-hour loan, so don’t wait until the day before the exam to try to use them.)


The Silberberg texts are excellent for combining economics and mathematics, particularly for the comparative statics. You may find them quite useful for some of the initial material in the consumer theory section and the theory of the firm.


Jehle and Reny is similar to Varian if you want an alternative presentation, but there are several topics they don’t cover.


Mas-Colell, et al., is sometimes used in a course such as this one. It is quite useful for the topics you will be covering in ECG 702 and will probably be used next semester. For that reason, you may want to purchase it now. However, it is not as useful for 701 as Varian.


Deaton and Muellbauer is excellent for some topics in consumer theory, and is more empirically oriented than the other texts.


Luenberger is idiosyncratic: sometimes an intermediate microeconomics text and sometimes covering topics that aren’t covered in any of the other texts. It is the only text that discusses directional distance functions and the benefit function.


Chapter 9 is useful for the multi-market equilibrium section.

Friedman, *Price Theory*, Aldine, HB171.5 .F75 1976

Chapter 7 is useful for the multi-market equilibrium section.
The articles cited below are available electronically from JSTOR, ScienceDirect, or Electronic Reserves. Students and faculty at NCSU have access to all three. The easiest way to do this for JSTOR and ScienceDirect is through the catalog on the NC State library website. Find the journal in the catalog -- www.lib.ncsu.edu/catalog/. There will be a link to the electronic versions. You may need to login with your Unity id and password. If you are off-campus and have a firewall, you will need to instruct your firewall program that www.lib.ncsu.edu is a trusted site. Articles that aren’t available from these two sources will be put on Electronic Reserves through http://www.lib.ncsu.edu/reserves/. If an article isn’t available electronically, I will provide copies.

In the course outline below, the readings in Varian and the articles in journals are highly recommended. The readings in the other books are only to provide alternative presentations if you want them (unless I specifically mention in class that the reading is crucial).

Course Outline and Readings

The amount of time that will be devoted to each of the sections below varies greatly. In particular, section II covers a tremendous amount of material and will take an appropriate amount of time. (All of the topics are intertwined – that is the essence of duality.) Also, the division between some sections is somewhat artificial, for example sections II and III.

Consumers

I. Consumer Preferences and Opportunity Sets

Varian: 7.1 and 7.2
MasColell: 1
Silberberg: 10.1
Jehle: 1.1 – 1.3
Deaton and Muellbauer: 1, 2.1

II. Consumption Decisions, Duality, and Comparative Statics

Varian: 7.2 -7.5 and the appendix, 8.1-8.4, 8.6, 9.2, 9.5, 9.6, 10.3


MasColell: 2, 3A - 3.G
Silberberg: 10
Jehle: 1.4, 2.1
Deaton and Muellbauer: 2.2-2.5, 2.7
III. Properties of Demand Systems, Integrability, and Functional Forms

Varian: 8.3, 8.5, 12.10, 12.11
Silberberg: 11.2, 11.6
MasColell: 3.H
Jehle: 1.5, 2.2
Deaton and Muellbauer: 3

IV. Consumption with some quantities fixed:
Conditional demand, rationing, mixed demand systems, benefit function, etc.


Madden, “A Generalization of Hicksian q Substitutes and Complements with Application to Demand Rationing,” Econometrica, 59(5), September 1991, 1497-1508, JSTOR


Deaton and Muellbauer: 4.3

V. Welfare Measurement

Varian: 10
Silberberg: 11.5, 19.7
MasColell: 3.I
Deaton and Muellbauer: 7.4

VI. Revealed Preference

Varian: 8.7-8.11
Deaton and Muellbauer: 2.6
Silberberg: 11.1-11.2
MasColell: 3.J
Jehle: 2.3

VII. Separability and Aggregation over Commodities

Varian: 9.3
Deaton and Muellbauer: 5
Silberberg: 11.3
VIII. Aggregation over Individuals

Varian: 9.4
Pollak and Wales, “Demographic Variables in Demand Analysis,” *Econometrica*, 49(6), November 1981, 1533-1551 JSTOR
John Muellbauer, "Economics and the Representative Consumer" Chapter 2 in *Solari and Du Pasquier, Private and Enlarged Consumption*. The article is on Electronic Reserves.
MasColell: 4
Deaton and Muellbauer: 6

Firms

I. Production Technologies

Varian: 1
Silberberg: 9.1
MasColell: 5.B
Jehle: 3.1, 3.2

II. Costs

Varian: 4 - 6
Silberberg: 8, 9.2 – 9.4
MasColell: 5.C, 5.D
Jehle: 3.3, 3.4

III. Profit maximization, firm supply, and derived demand

Varian: 2 – 3
Silberberg: 4, 6, 7
MasColell: 5.F
Jehle: 3.5

Markets

I. Market-level Supplies and Competitive Markets

Varian: 13
MasColell: 5.E, 10.C
Jehle: 4.1
Silberberg, 8.10 and 8.11, eds. 2 or 3 (7.9 and 7.10, ed. 1)
Ferguson and Saving, “Long-Run Scale Adjustments of a Perfectly competitive Firm and Industry,” AER, Dec 1969, JSTOR
II. Multi-market equilibrium

Layard and Walters: 9
Friedman: 7
Diewert, “A Note of the Elasticity of Demand in the N-factor Case,” Economica, May 1971, JSTOR

III. Monopoly

Varian: 14
MasColell: 12.B

The Nature of the Firm


Externalities, Public Goods, and Property Rights

Varian: 24, 23
Silberberg: 19.8, 19.6
MasColell: 11
Cornes and Sandler: 3, 4, 6