APPLICATION FOR NEW COURSE

1. Submitted by College of The Graduate School Date 5/26/05
   Department/Division offering course The Martin School of Public Policy and Administration

2. Proposed designation and Bulletin description of this course
   a. Prefix and Number PA 750
   b. Title* Introduction to Economics for Public Policy
      *NOTE: If the title is longer than 24 characters (including spaces), write
      A sensible title (not exceeding 24 characters) for use on transcripts Econ. for Public Policy
   c. Lecture/Discussion hours per week 3
   d. Laboratory hours per week
   e. Studio hours per week
   f. Credits 3
   g. Course description
      Introduction to microeconomic theory and mathematical methods for policy analysis.
   h. Prerequisites (if any)
      PUAD Master’s or Ph.D. program status or permission of the instructor.
   i. May be repeated to a maximum of
      (if applicable)

4. To be cross-listed as
   Prefix and Number
   Signature, Chairman, cross-listing department

5. Effective Date Fall 2005

6. Course to be offered ☒ Fall ☐ Spring ☐ Summer

7. Will the course be offered each year? ☐ Yes ☐ No
   (Explain if not annually)

8. Why is this course needed?
   Equips Ph.D. students in Public Administration with tools of microeconomic theory & related methods to prepare for PA 752.
   Provides an advanced economics class for Public Policy master’s students to supplement PA 652.

9. a. By whom will the course be taught? David Wildasin or Eugenia Toma
   b. Are facilities for teaching the course now available? ☒ Yes ☐ No
      If not, what plans have been made for providing them?
APPLICATION FOR NEW COURSE

10. What enrollment may be reasonably anticipated? 6-15

11. Will this course serve students in the Department primarily?
☐ Yes  ☐ No
Will it be of service to a significant number of students outside the Department?
☐ Yes  ☐ No
If so, explain.
May serve students in Agricultural Economics.

12. Will the course serve as a University Studies Program course?
☐ Yes  ☐ No
If yes, under what Area?

13. Check the category most applicable to this course
☐ traditional; offered in corresponding departments elsewhere;
☒ relatively new, now being widely established
☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at the University of Kentucky?
☒ Yes  ☐ No

15. Is this course part of a proposed new program:
☐ Yes  ☐ No
If yes, which?
Will adding this course change the degree requirements in one or more programs?*
☐ Yes  ☐ No
If yes, explain the change(s) below
Ph. D. program will use this course as part of the 6 hr. theory requirement. ECO 601 will no longer be required.

16. Attach a list of the major teaching objectives of the proposed course and outline and/or reference list to be used.

17. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted. ☐ Check here if 100-200.

18. If the course is 400G or 500 level, include syllabi or course statement showing differentiation for undergraduate and graduate students in assignments, grading criteria, and grading scales. ☐ Check here if 400G-500.

19. Within the Department, who should be contacted for further information about the proposed course?
Name  Dr. Eugenia Toma or Dr. David Wildasin  Phone Extension  7-5741 & 7-2456

*NOTE: Approval of this course will constitute approval of the program change unless other program modifications are proposed.
APPLICATION FOR NEW COURSE

Signatures of Approval:

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>Dean of the College</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>*Undergraduate Council</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>*University Studies</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>*Graduate Council</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>*Academic Council for the Medical Center</td>
<td>Date</td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>*Senate Council (Chair)</td>
<td>Date of Notice to University Senate</td>
</tr>
</tbody>
</table>

*If applicable, as provided by the Rules of the University Senate

ACTION OTHER THAN APPROVAL

Rev 3/04
APPLICATION FOR NEW COURSE

Signatures of Approval:

[Signature]
Department Chair

[Signature]
Dean of the College

[Signature]
Undergraduate Council

[Signature]
University Studies

[Signature]
Graduate Council

[Signature]
Academic Council for the Medical Center

[Signature]
Senate Council (Chair)

Date of Notice to the Faculty

Date

Date

Date

Date

Date of Notice to University Senate

Date

ACTION OTHER THAN APPROVAL

Rev 8/02
PA795: Introduction to Economics for Public Policy

The goal of this course is to introduce Ph. D. students from the Martin School to the tools of economics and to show how these tools are useful for policy analysis. This course will be followed by PA752, which continues the same theme, building upon the ideas and methods developed in this course. At the conclusion of these two courses, students should have a solid grounding in basic ideas in economics and should have begun to develop an understanding of how economic modeling is used in applied public policy analysis.

COURSE DESCRIPTION

Students in this course come with varied backgrounds in economics and mathematics, and with varied learning objectives. The course will involve three central components:

(i) The main substantive content of the course is the theory of household behavior and the theory of the firm, which are foundation elements in the use of economics in policy analysis.

(ii) To understand these ideas and to see how to use them correctly in applications, it is necessary to learn basic mathematical methods, especially methods of constrained optimization, which are part of the standard toolkit of economic analysis.

(iii) In order to begin to develop an appreciation of the art of applied economic analysis, models of household and firm behavior will be used to study a variety of public policy issues.

Please see the instructor’s notes on “The Structure of Economics” for more detailed discussion of the field of economics and the role of this course in the Martin School Ph.D. program.
COURSE MATERIALS

1. The principle text for the course is

W. Nicholson, Microeconomic Theory: Basic Principles and Extensions, 8th ed. (Southwestern/Thomson Learning, 2002).

We will work through approximately 2/3 of Nicholson over the course of the semester.

2. I have also ordered:


As described further in “The Structure of Economics,” these are intended for background reference.

3. Everyone should have access to a standard undergraduate calculus textbook. Ideally, you will have retained a calculus book from previous study but, if not, you will be well-advised to purchase one. Whatever textbooks are being used at UK in math department calculus courses will almost certainly be adequate. The key materials that your book should contain are: Derivatives (for functions of a single variable), some discussion of $e^x$ and $\ln(x)$, and partial derivatives/partial differentiation (for functions of several variables, i.e., the multivariate case). If there is some material on linear algebra/matrix algebra, that would be nice, too. Although we won’t use such methods very much in our class, we’ll see at least a few matrices; they are used frequently in microeconomic theory.

As you will know from previous calculus instruction (specifically, from the fundamental theorem of calculus), any book that covers differentiation will also have chapters on integration. Integrals are used in economics, too, especially in dynamic (intertemporal) analysis and also (and more directly relevant for the present course) in the analysis of consumer welfare. I will try to use a few integrals here and there but only in simple cases.


is one representative example of a suitable calculus textbook.
4. A few articles from economics journals will also be assigned. For the most part, these will be non-technical "classics" which should greatly deepen your appreciation of economic analysis, its methodological foundations, its origins, and its potential application.

Most of these journal articles are available online from the UK libraries. You should become familiar, if you are not already so, with the electronic journals database, which can be accessed from the UK home page. In addition, one or two items may be posted on the UK library’s e-reserves. Instructions for accessing this resource will be provided in class.

COURSE REQUIREMENTS

Grades for this course will be based on your performance on homework assignments, quizzes, a mid-term exam, and a final exam.

Homeworks (4 assignments): 20%

Quizzes (2): 20%

Midterm exam: 30%

Final exam: 30%

The homework assignments will consist largely of simple problem-solving exercises intended to improve understanding of key concepts. I expect that students may discuss these together but the papers that are turned in must be written (neatly!) in your own hand.
ADMINISTRATIVE MATTERS

Email

I will make occasional announcements to the class via email. Please send me an email immediately, identifying yourself as a member of the Ph.D. PA795 course, so that I can create an email distribution list for the class.

Consultation

I will normally be available for meetings with students in my office on Tuesdays and Thursdays after class, from 4:30 until 5:15. In addition, I can be available by appointment on most days. In general, you contact me at least 24 hours in advance to make an appointment.

Missed Classes/Assignments

Students are expected to attend all classes and to hand in all assignments in accordance with the class schedule. If you are ill or have some other compelling reason for missing an assignment, quiz, etc. please let me know at the earliest feasible time (i.e., not after the fact). You won’t be downgraded for excused absences – the weight attached to your other work will be increased accordingly.

Academic Integrity

Honesty is critically important in education, research, and policy analysis and formulation. All students are expected to adhere to the highest standards of academic integrity, and have a right to expect others to do the same. Every student should be fully familiar and act in accordance with UK standards for academic honesty and thus help to preserve the environment of trust without which the academic process cannot succeed. If you have any questions about the standards of behavior that are expected of UK students, please consult with me or appropriate administrative personnel.
SCHEDULE

The schedule this semester will be somewhat complicated by the fact that I will have to be out of town on a few occasions. We will have to make up the missing classes. This should be done relatively early on in the semester so that you are not scrambling to learn a large amount of new material late in the term when everyone is especially harried.

Here is a schedule with some important dates. I will make every effort to adhere as nearly as possible to the dates shown for scheduled homeworks, quizzes, and exams.

Week 1: Thursday, August 26, 2003

First meeting. I will be absent for this class, but we should already have been in contact via email. You should pick up the following materials from April Harmon:

1. This syllabus.
2. A survey in which you describe your interests and background.
3. A reading list.
5. A handout on “The Structure of Economics.”

Please complete the survey and bring it, along with all of the other materials, to the next regularly-scheduled class meeting. Also, please be prepared to discuss your schedule for the coming weeks so that we can begin planning for additional meetings.

Week 2: Tuesday/Thursday, August 31/September 2

We will begin with an introduction to the course introduction, discussion of administrative matters, and some economics/math review.

Week 3: Tuesday/Thursday, September 7/9

- HOMEWORK #1: Thursday, September 9.
Week 4: Tuesday/Thursday, September 14/16
  • HOMEWORK #2: Thursday, September 16.

Week 5: Tuesday/Thursday, September 21/23

Week 6: Tuesday/Thursday, September 28/30
  • QUIZ #1: Tuesday, September 28.

Week 7: Tuesday/Thursday, October 5/7

Week 8: Tuesday/Thursday, October 12/14
  • MIDTERM EXAM: Tuesday, October 12.

Week 9: Tuesday/Thursday, October 19/21

Week 10: Tuesday/Thursday, October 26/28
  • HOMEWORK #3: Thursday, October 28.

Week 11: Thursday, November 4
  No class on Tuesday. Get out and vote!

Week 12: Tuesday/Thursday, November 9/11
  • HOMEWORK #4: Thursday, November 11.

Week 13: Tuesday/Thursday, November 16/18

Week 14: Tuesday, November 23
  • QUIZ #2: Tuesday, November 23.

  THANKSGIVING BREAK: Thursday, November 25

Week 15: Tuesday/Thursday, November 30/December 2
Week 16: Tuesday/Thursday, December 7/9

End of Classes

FINAL EXAM: Thursday, December 16, 1:00–3:00PM
PA795: Introduction to Economics for Public Policy: Readings

I. Mathematical Review and Some Initial Applications

A. Basic mathematics background.

* Nicholson, Ch. 2, pp. 22-32 (up to implicit functions).

B. Basic economics background.

Browning and Zupan, Ch. 1.

C. Demand and Supply Analysis.

Varian, Ch. 1.

Browning and Zupan, Ch. 2.

Endogenous and exogenous variables; comparative statics analysis.

* Nicholson, Ch. 2, pp. 32-34 (the implicit function theorem) and 34-39 (the envelope theorem: skin for now).

Public policy applications: The effects of taxes on cigarettes, land, and oil imports.

II. The Methodology of Economics

* Nicholson, Ch. 1.


Public policy applications: The dangers of tautology; implicit vs. explicit models.
III. The Wealth of Nations

Specialization and the Division of Labor, Exchange, and Markets


“I have seen a small manufactory ... where ten men only were employed. ... Each person, therefore, making a tenth part of forty-eight thousand pins in a day, might be considered as making four thousand eight hundred pins a day. But if they had all wrought separately and independently, ... they certainly could not each of them have made, twenty, perhaps not one pin in a day. ... The division of labour, however, so far as it can be introduced, occasions, in every art, a proportionable increase in the productive powers of labour.”


“... the propensity to truck, barter, and exchange ...”

* A. Smith, “That the Division of Labour Is Limited by the Extent of the Market,” The Wealth of Nations, Book I, Ch. 3.

“As it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of that power, or, in other words, by the extent of the market.”

Public policy applications: Achetons Wallons!

IV. Consumer Choice and Demand Theory

A. The Budget Constraint

Varian, Ch. 2

Browning and Zupan, Ch. 3.2.

Public policy applications: Budget allocation in an agency; intergovernmental grants and New York school reform.

B. Preferences

* Nicholson, Ch. 3.

Varian, Chs. 3, 4.

Browning and Zupan, Ch. 3.1.
Public policy applications: Paternalism and public policy; Cyclical voting and the failure of transitivity.

C. Utility Maximization

* Nicholson, Ch. 2, pp. 39–55 (constrained optimization).

* Nicholson, Ch. 4.

Varian, Ch. 5.

Browning and Zupan, Ch. 3.3.

Public Policy Applications: Cash vs. In-Kind Transfers.

D. Demand

* Nicholson, Chs. 5, 6, and 7.

Varian, Chs. 6, 8, 15.

Browning and Zupan, Ch. 4.

Public policy applications: Subsidizing health care, taxing cigarettes – policy begets policy.

E. Consumer’s Surplus

Varian, Ch. 14.

Public policy applications: Deadweight welfare loss; tax analysis revisited; gains and losses from protectionism; tariffs vs. quotas.

V. Extensions of Consumer Choice Theory

A. Intertemporal Choice

* Nicholson, Ch. 23, pp. 626–634 (up to the “The Firm’s Demand for Capital”).

Varian, Ch. 10.

Public policy applications: Taxing income, earnings, or consumption?

B. Choice Under Uncertainty

* Nicholson, Ch. 8.

Varian, Ch. 12.
Public policy applications: Income redistribution as social insurance; taxation and risk-taking.

C. Households as Suppliers

* Nicholson, Ch. 22 (skip pp. 616-620, “Labor Unions”).

Varian, Ch. 9.

Public policy applications: Taxation and labor supply; the deadweight loss from taxation revisited.

VI. Theory of the Firm

A. Technology and Costs

Nicholson, Chs. 11 and 12.

Varian, Chs. 18, 20, 21.

Browning and Zupan, Chs. 7 and 8.


Public policy applications: Private vs. public goods; congestion effects; production externalities.

B. Profit Maximization and Competitive Supply

Nicholson, Chs. 13, 14.

Varian, Chs. 19, 22, 23.

Browning and Zupan, Chs. 9, 10.

Public policy applications: Who benefits from regional investment subsidies?

C. What Is a Firm and How Is It Organized?


Public policy applications: The organization of public agencies; federalism and the organization of the public sector.
D. Departures from Perfect Competition: Monopoly

Nicholson, Ch. 18; Ch. 22, pp. 616-620 ("Labor Unions").

Varian, Chs. 24, 25.

Browning and Zupan, Chs. 11 and 12.

Public policy applications: Natural monopoly and public utility regulation; international competition and monopoly power.

VII. Market Equilibrium and Efficiency

A. Efficiency of Competitive Equilibrium

* Nicholson, Chs. 14-17.

Browning and Zupan, Chs. 10, 19.

Varian, Ch. 30.


Public policy applications: Energy prices and their effects;

B. Externalities


Browning and Zupan, Ch. 20.

Varian, Ch. 33.

Public policy applications: Energy prices and their effects; buying a town; ecological dumping.

VIII. Factor Markets and Income Distribution

* Nicholson, Ch. 21 and Ch. 23, 631 end.

Browning and Zupan, Chs. 16, 18.

Varian, Ch. 26.
Public policy applications: Wage dispersion and investment in human capital; trade liberalization and earnings inequality.

IX. Game Theory: An Introduction

Varian, Ch. 28.

Browning and Zupan, Ch. 14.