



## Department of Economics Course Outline

<b>Course:</b>	Economics 617 [Advanced Econometrics II]	<b>Term:</b>	Fall
<b>Time:</b>	WF 12:00 – 13:15	<b>Section:</b>	01
<b>Instructor:</b>	Arvind Magesan	<b>Place:</b>	SS 423 (subject to change)
<b>Office:</b>	SS 430	<b>Telephone:</b>	220-5276
<b>Office Hours:</b>	TBA	<b>E-mail:</b>	<a href="mailto:arvindmagesan@gmail.com">arvindmagesan@gmail.com</a>

### Textbook(s):

There are no required textbooks for this course. Recommended texts will be discussed on the first day of class.

### Book(s) on Reserve: none

A detailed outline will be provided on the first day of class.

### Course Outline:

Briefly: This is a course on the use of empirical dynamic models in economics, with a particular focus on dynamic discrete choice models. Discrete choice models take seriously the fact that often times the outcomes we observe in data are the product of decision making by economic agents - that they are **choices**. Examples include (but are not limited to): the choice to retire, migrate, smoke, enter the labor force, go to college; the choice of occupation; firm choices to enter a market, consumer Demand of durable goods, and country choice to democratize or liberalize a market. These applications all have in common the fact that the economic unit of interest (worker, firm, consumer, country) chooses one among a finite set of alternatives. We will study how applied researchers combine economic models with data and econometric techniques to estimate the "deep parameters" of the decision problem (preferences and constraints) in discrete choice contexts.

Estimation of parameters is only a means to an end, however. Many interesting questions in economics are of the form: “what **would** happen to Y if we increased X, and just as importantly, **why**?” In the context of the examples above, Y is an endogenous outcome of the model such as social security (retirement), unemployment (migration, labor force participation etc), consumer surplus and market productivity (firm and consumer decisions), and international trade, while X is typically a policy such as retirement or unemployment benefit schemes, border enforcement, barriers to entry, import tariffs etc. The fact that we use the word “would” emphasizes that these questions are **counterfactual** in nature. That is, we don't observe the policy we wish to evaluate occur in the data, so we use our estimated model to study what **would** happen when we change a policy.

As much of the course is about learning **how** to use the methodology to answer interesting questions in economics that fit in the discrete choice mold, we will spend considerable time developing the toolkit of structural econometrics. While the “workhorse model” of dynamic discrete choice I will present and rely heavily on is most relevant to Empirical Industrial Organization, we will consider many applications in other fields such as labor, trade, the environment etc.

### Grade Determination and Final Examination Details:

Problem sets: 50%

Presentation: 20%

Take Home Final: 30%

Items are marked on a numerical (percentage) basis, and then converted to letter grades. The course grade is then calculated using the weights indicated above. As a guide to determining standing, these letter grade equivalences will apply:

A+	95 – 100	B	73 - 76	C-	60 - 62
A	85 - 94	B-	70 - 72	D+	56 - 59
A-	80 - 84	C+	67 - 69	D	50 - 55
B+	77 - 79	C	63 - 66	F	0 - 49

Non-programmable calculators WILL be allowed during the writing of tests or final examinations.

In the event of illness, the weight of the presentation will be shifted to the final exam.

### Notes:

- Students seeking reappraisal of a piece of graded term work (term paper, essay, etc.) should discuss their work with the Instructor *within fifteen days* of the work being returned to the class.
- It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at

220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

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