



# Topics in Microeconomic Theory

## EC 425

### Course Outline

<b>Objective</b>	This course consists of 36 hours of lectures on various topics in microeconomic theory, taught at the intermediate/advanced undergraduate level. The emphasis throughout is on economic modelling of phenomena as diverse as strategic interaction, collective decision making, general equilibrium, uncertainty and information, contracting and externalities.			
<b>Lecturer</b>	<b>Name</b> Dr. Ashley Piggins	<b>Office</b> Room 329 Cairnes Building	<b>Ext</b> 2300	<b>E-mail</b> ashley.piggins@nuigalway.ie
<b>Times</b>	Lectures:	<b>Day</b> Monday Wednesday Friday	<b>Time</b> 4 - 5 2 - 3 1 – 2	<b>Venue</b> Cairnes Kirwan UC102 Aras Ui Chathail
<b>Overall Learning Outcomes</b>	<p>Understand how to represent situations of strategic interaction as games.</p> <p>Understand the concepts of dominant strategy equilibrium and Nash equilibrium.</p> <p>Understand mixed strategy equilibrium and use the method of best responses to compute the mixed strategy Nash equilibrium of a game.</p> <p>Apply game-theoretic reasoning to models of oligopoly, second price auctions and the median voter theorem.</p> <p>Understand principles of dynamic games such as backward induction.</p> <p>Understand the basic general equilibrium model of a pure exchange economy using the Edgeworth Box diagram.</p> <p>Understand the fundamental welfare theorems.</p> <p>Understand the majority voting paradox and the difficulties that arise in making social choices.</p> <p>Understand Arrow’s Impossibility Theorem.</p> <p>Understand the von Neumann – Morgenstern utility function.</p> <p>Understand the different attitudes to risk.</p> <p>Understand the problems of asymmetric information in markets, and explain how these problems can be overcome.</p> <p>Understand the principle of incentive-compatible contracting.</p>			

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	Understand the problem of externalities and appreciate the importance of the Coase Theorem.
<b>Format</b>	Three lectures per week, 36 lectures in total. One tutorial every fortnight.
<b>Programme(s)</b>	4BC2, 1EK3, 1EM1, 1OA1, 3BA1, 3BA6, 3BC1, 3BSY2, 3FM2, 4BA4, 4BC3, 4BC6.
<b>Course Material</b>	A course website is available at <a href="http://blackboard.nuigalway.ie">http://blackboard.nuigalway.ie</a>

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<b>Core Text</b>	<p>There is no set text for this course. I will use my own notes.</p> <p>I recommend that you read (in addition to my notes) the relevant chapters in Hal Varian, "Intermediate Microeconomics" (8th edition) and Joel Watson "Strategy: An Introduction to Game Theory" (2nd edition). Ken Binmore's "Playing for Real" is also a very thoughtful introduction to game theory. All of these books are in the library (we have many copies).</p>
<b>Supplementary Texts</b>	
<b>Assessment</b>	1. End of Year Examination 100%
<b>Workload hours</b>	<p>Credit weighting: 5 ECTS Lecture hours: 36 hours Tutorials: 4 hours Independent study (including tutorial prep): 58 hours Examination: 2 hours Total Student Effort: 100 hours</p>

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**Lecture Schedule 2012/2013:**

<b><u>Week</u></b>	<b><u>Topic</u></b>
<b><u>1</u></b>	<b><u>Game Theory</u></b>
<b><u>2</u></b>	<b><u>Game Theory</u></b>
<b><u>3</u></b>	<b><u>Game Theory</u></b>
<b><u>4</u></b>	<b><u>Oligopoly</u></b>
<b><u>5</u></b>	<b><u>Median Voter Theorem and Auctions</u></b>
<b><u>6</u></b>	<b><u>General Equilibrium</u></b>
<b><u>7</u></b>	<b><u>General Equilibrium</u></b>
<b><u>8</u></b>	<b><u>Welfare Theorems</u></b>
<b><u>9</u></b>	<b><u>Social Choice Theory</u></b>
<b><u>10</u></b>	<b><u>Uncertainty and Information</u></b>
<b><u>11</u></b>	<b><u>Uncertainty and Information</u></b>
<b><u>12</u></b>	<b><u>Externalities</u></b>