



# HANYANG UNIVERSITY

## Hanyang International Winter School

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<b>Course Information</b>	<b>Class No.</b>	18501	<b>Course Code</b>	ECO2035	<b>Credits</b>	3	
	<b>Course Name</b>	Game Theory & Its Applications					
	<b>Lecture Schedule</b>	Mon-Fri / 13:00~17:30					
	<b>Course Description</b>	Game theory and its applications					
	<b>Course Objective</b>	<ul style="list-style-type: none"> <li>Understanding various game-theoretic strategic decision making problems</li> <li>Understanding various formulations and solution concepts in game theory</li> </ul>					
	<b>Prerequisite</b>	basic mathematics					
	<b>Materials/Textbooks</b>	<ul style="list-style-type: none"> <li>A course in game theory, M. J. Osborne</li> <li>Game Theory: An Introduction, S. Tadelis</li> </ul>					
<b>Evaluation</b>	<b>Attendance</b>	10 %	<b>Quiz</b>	%			
	<b>Assignment</b>	30 %	<b>Mid-term Exam</b>	30 %			
	<b>Presentation</b>	%	<b>Final Exam</b>	30 %			
	<b>Group Project</b>	%	<b>Participation</b>	%			
	<b>Etc.</b>	<b>Evaluation Item</b>			<b>Ratio</b>		
					%		
			%				
<b>Daily Lecture Plan</b>	<b>Day 1</b>	<ul style="list-style-type: none"> <li>Course introduction</li> <li>Introduction to game theory and decision-making problems, and their applications</li> </ul>					
	<b>Day 2</b>	<ul style="list-style-type: none"> <li>Strategic games: Concept and formulation</li> </ul>					
	<b>Day 3</b>	<ul style="list-style-type: none"> <li>Strategic games: Nash equilibrium</li> </ul>					
	<b>Day 4</b>	<ul style="list-style-type: none"> <li>Strategic games: Mixed strategy and existence</li> </ul>					
	<b>Day 5</b>	<ul style="list-style-type: none"> <li>Review and Midterm</li> </ul>					
	<b>Day 6</b>	<ul style="list-style-type: none"> <li>Extensive games: Formulation and perfect information</li> </ul>					
	<b>Day 7</b>	<ul style="list-style-type: none"> <li>Extensive games: Nash equilibrium and subgame perfect equilibrium</li> </ul>					
	<b>Day 8</b>	<ul style="list-style-type: none"> <li>Application I: game theory in economics</li> </ul>					
	<b>Day 9</b>	<ul style="list-style-type: none"> <li>Application II: game theory in engineering (communication and networks)</li> </ul>					
	<b>Day 10</b>	<ul style="list-style-type: none"> <li>Review and Final</li> </ul>					