**SYLLABUS FOR THE COURSE : GAME THEORY – MASTER LEVEL**

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| **Course Basic Information** | | | |
| **Academic Unit:** | Faculty of Economics | | |
| **Course title:** | Game Theory | | |
| **Level:** | Master studies | | |
| **Course Status:** | Elective | | |
| **Year of Study:** | Year I, Semester II | | |
| **Number of Classes per Week:** | 2 | | |
| **ECTS Credits:** | 4 | | |
| **Time /Location:** |  | | |
| **Teacher:** | Nimete Berisha | | |
| **Contact Details:** | [nimete.berisha@uni-pr.edu](mailto:nimete.berisha@uni-pr.edu) | | |
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| **Course Description:** | Game theory is the study of decision problems which involve more than one agent. Given the prevalence of such problems in economics, game theory has become a very important methodological tool in many of its fields, including industrial economics, political economy or international trade. | | |
| **Course Goals:** | This module aims at equipping students with the core knowledge of game theory as applied to economics, making special emphasis on applications and examples, rather than pure theory. | | |
| **Expected Learning Outcomes:** | By the end of the module students should be able to:   * correctly represent games in normal and extensive form * identify equilibrium solutions to static games * identify equilibrium solutions to dynamic games * show awareness of the informational characteristics of a game and their impact on its resolution * have developed the technical skills required to apply the game theory tools to economic problems * analyse the results obtained from economic experiments, critically reflect on the behavioural implications derived from experiments and real world observations | | |
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| **Student Workload (should be in compliance with student’s Learnign Outcomes)** | | | |
| **Activity** | **Hours** | **Day/ Week** | **Total** |
| Lectures | 2 | 8 | 16 |
| Theory/ Lab Work/Exercises | 2 | 7 | 14 |
| Practical Work |  |  |  |
| Consultations with the teacher | 1 | 2 | 2 |
| Field Work |  |  |  |
| Test, seminar paper | 2 | 2 | 4 |
| Homework | 3 | 8 | 24 |
| Self-study (library or home) | 2 | 15 | 30 |
| Preparation for final exam | 6 | 1 | 6 |
| Assessment time (test, quiz, final exam) | 2 | 2 | 4 |
| Projects, presentations, etc. |  |  |  |
| **Total** |  |  | **100** |
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| **Teaching Methods:** | *Lectures, exercises during contact hours, individual homework* | | |
| **Assessment Methods:** | Individual assignments completed in class 30%; Individual assignments completed at home 30%;  Tests 15%  Exam 25%. | | |
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| **Primary Literature:** | S. Tadelis, *Game Theory: An Introduction,* Princeton University Press (2013) | | |
| **Additional Literature:** | P Dutta, *Strategies and Games: Theories and Practice,* MIT Press, 1999 | | |

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| **Designed teaching plan** | |
| **Week** | **Title of the Lecture** |
| ***Week 1:*** | Rational Decision Making: The Single-Person Decision Problem |
| ***Week 2:*** | Introducing Uncertainty and Time |
| ***Week 3*:** | Static Games of Complete Information: Preliminaries |
| ***Week 4:*** | Rationality and Common Knowledge |
| ***Week 5:*** | Nash Equilibrium |
| ***Week 6*:** | Mixed Strategies |
| ***Week 7:*** | Dynamic Games of Complete Information: Preliminaries |
| ***Week 8:*** | Credibility and Sequential Rationality |
| ***Week 9:*** | Multistage Games |
| ***Week 10:*** | Repeated Games |
| ***Week 11*:** | Strategic Bargaining |
| ***Week 12*:** | Static Games of Incomplete Information: Bayesian Games |
| ***Week 13*:** | Auctions and Competitive Bidding |
| ***Week 14*:** | Mechanism Design |
| ***Week 15*:** | Dynamic Games of Incomplete Information |

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| **Academic Policies and Code of Conduct** |
| *We start and finish class on time.*  *Tools used during class must be cleaned and stored away at the end of class.*  *Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.*  *Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.* |

**Note | If a student has more than 3 class assignements evaluated below 50% he/she loses the right on taking the final exam. Evaluation is done from 0-100 %.**