# Course Descriptions None 2020-2021

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| Course Title | Neuroeconomics: Decision Making and the Brain |
| Course Code | EBC2166 |
| ECTS Credits | 6,5 |
| Assessment | Whole/Half Grades |

Period

| Period | Start | End | Mon | Tue | Wed | Thu | Fri |
|---|---|---|---|---|---|---|---|
| 4 | 1-2-2021 | 26-3-2021 | X | | X | | |

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| Level | Intermediate/Advanced |
| Coordinator | Matthias Wibral For more information:m.wibral@maastrichtuniversity.nl |
| Language of instruction | English |
| Goals | Students will recognize different disciplinary approaches to understand human decision-making and compare these to the interdisciplinary approach of Neuroeconomics. They will summarize different models within the area of Neuroeconomics and apply them to various decision-making domains. Students will also learn to critically evaluate existing studies. |
| Description | PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. THE INFORMATION PROVIDED HERE IS BASED ON THE COURSE SETUP PRIOR TO THE CORONAVIRUS CRISIS. AS A CONSEQUENCE OF THE CRISIS, COURSE COORDINATORS MAY BE FORCED TO CHANGE THE TEACHING AND ASSESSMENT METHODS USED. THE MOST UP-TO-DATE INFORMATION ABOUT THE TEACHING/ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS. Neuroeconomics, sometimes also known as Decision Neuroscience, is an emerging field combining insights from economics, psychology and neuroscience to understand how (healthy) humans make decisions and how these are related to underlying cognitive and neural processes. The ultimate aim of Neuroeconomics is to integrate knowledge from the different parent disciplines to answer the fundamental question of how our brain makes us decide. This will help answering important questions like: Why are we procrastinating difficult choices? What makes us cooperating even with strangers? Why are we buying lottery tickets knowing that we almost certainly will lose our money? Why are bubbles on financial markets the standard rather than the exception?<br>This course provides an introduction to this exciting endeavour as well as a critical discussion and reflection on the most important results achieved so far. The course will introduce the general idea behind Neuroeconomics by discussing examples showing the limitations of viewing decision making merely through the lens of the traditional fields of economics, psychology and neuroscience.<br>The course will review various methods used in Neuroeconomics research for measuring and influencing brain activity. An important part of the course will be devoted to learning about the foundations and models of Neuroeconomics such as the basics of neuroscience (including cellular and anatomical structures of the brain), reward prediction error, drift diffusion and multiple self models and how these are related to more standard economic models of individual and interactive decision making (game theory).<br>Equipped with these tools and background, we will read, discuss, and critically evaluate seminal and recent studies in Neuroeconomics. Possible topics include:<br>* Subjective value and decision making: how does our brain evaluate, compare and make us choosing between different options?<br>* Decision-making under risk: what are the neural mechanisms underlying our decisions to gamble in the casino and buy insurance contracts?<br>* Decision-making over time: what are the brain areas that make us patient or impatient and how is their neural activity related to procrastination, need of deadlines and the proneness to intermediate gratification?<br>* Social decisions: what brain mechanisms make us humans be nice or nasty to other people? Are we intrinsically selfish or generous and how can we find out about it?<br>This interdisciplinary and challenging course consists of lectures and group work. It will use formal concepts from economics and neuroscience. Students should therefore not be afraid of mathematics. The course is ideal for students who are open minded towards methods and models from other disciplines and have a genuine interest in interdisciplinary thinking. |
| Literature | Selected chapters from Glimcher, P. W. and Fehr E. (eds.) 'Neuroeconomics: Decision Making and the Brain', Academic Press, London , UK, 2nd edition, 2014.<br>Selected research articles. |
| Prerequisites | Students should be in the 3rd year of Economics or Business Economics (period 4); the course is also open to students of International Business provided they have sufficient quantitative skills.<br>Students should know the basics of microeconomics and game theory. |
| Keywords | |
| Teaching methods | PBL / Lecture |
| Assessment methods | Final Paper / Attendance / Participation / Written Exam |
| Evaluation in previous academic year | For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM |

This course belongs to the following programme / specialisation

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| Bachelor Economics and Business Economics - Economics | Year 3 Economics Elective(s) |
| Bachelor Economics and Business Economics - Emerging Markets | Year 3 Elective Course(s) |
| Bachelor Economics and Business Economics - Economics and Management of Information | Year 2+3 Elective Course(s) |
| Bachelor Economics and Business Economics - International Business Economics | Year 3 Economics Elec(s) - Maj Accounting |
| Bachelor Economics and Business Economics - International Business Economics | Year 3 Economics Elec(s) - Maj Finance |
| Bachelor Economics and Business Economics - International Business Economics | Year 3 Economics Elec(s) - Maj Inf Mgmt |
| Bachelor Economics and Business Economics - International Business Economics | Year 3 Economics Elec(s) - Maj Marketing |
| Bachelor Economics and Business Economics - International Business Economics | Year 3 Economics Elec(s) - Maj Org |
| Bachelor Economics and Business Economics - International Business Economics | Year 3 Economics Elec(s) - Maj SCM |
| Bachelor Economics and Business Economics - International Business Economics | Year 3 Economics Elec(s) - Maj Strategy |
| Bachelor International Business | Year 3 Economics Elec(s) - Maj Accounting |
| Bachelor International Business | Year 3 Economics Elec(s) - Maj Finance |
| Bachelor International Business | Year 3 Economics Elec(s) - Maj Inf Mgmt |
| Bachelor International Business | Year 3 Economics Elec(s) - Maj Marketing |
| Bachelor International Business | Year 3 Economics Elec(s) - Maj Org |
| Bachelor International Business | Year 3 Economics Elec(s) - Maj SCM |
| Bachelor International Business | Year 3 Economics Elec(s) - Maj Strategy |
| SBE Exchange Bachelor | Bachelor Exchange Courses |
| SBE Exchange Master | Bachelor Exchange Courses |
| SBE Non Degree Courses | Bachelor Courses |
| Pre-master Human Decision Science | Disciplinary Course(s) |