Human and Legal Decision-Making (an interdisciplinary perspective from Law, Neuroscience, Psychology and Economics)

This (interfacultary) minor (24 ECTS) brings together perspectives on human and legal decision-making from law, neuroscience, psychology as well as economics. A joint collaboration between three UM faculties, it builds on the existing work of the Economics and Psychology/Neuroscience faculties, combining it with insights from and questions about neurolaw as well as its implications for legal and human decision-making. Researchers from all participating faculties are involved in the teaching of the associated courses.

Research has increasingly accumulated knowledge on the neuroscientific foundations and processes regarding human and legal decision-making. In this context, new scientific disciplines, such as decision neuroscience, forensic neuropsychology and neurolaw, have emerged and gained prominence. Partly due to the rapid advances that have been made, there is a general lack of understanding of the appropriate relationship between different fields of (social) sciences. This is evidenced by the rise of 'neuro-myths', such as the misconception that neuroimaging is capable of explaining decision-making behavior and legal behavior in a precise way and on individual level. Moreover, it remains unsettled to what extent and in which way judges and legislators ought to utilize these new types of evidence. Practitioners such as mental health professionals and lawyers are also faced with an increasing amount of neuroevidence and accordingly need to be aware of the benefits, dangers and challenges of this interdisciplinary approach.

The minor, as a whole, will provide the students with a basic understanding of the state of affairs regarding the current scientific knowledge on human and legal decision-making; the methodology used in research on decision-making; and finally the multifaceted relationship between the law, legal philosophy, neuroscience, psychology and economics. Owing to the variety of subjects covered by the minor, the content of the modules is adjusted to ensure that students from other disciplines are able to participate successfully in all courses.

The minor consists of four complementary courses; neurosciences & law, neuropsychology & law, economic psychology and methodological aspects of studying human and legal decision-making and neurosciences. Below you may find the relevant information for each course including some examples of recommended literature; this may help you to gain some insight in the specific content and goals of each course.

Please be informed that there is a maximum of 57 participants for this minor program.
Neurosciences & law

**Period:**
Period I  startdate: 05-Sep-16  enddate: 28-Oct-16

**Code**
Law3021

**ECTS credits**
6,0

**Organisational unit**
Faculty of Law

**Coordinator**
David Roef

**Description**
This course introduces students to the new interdisciplinary field of law, neuroscience and philosophy. It uses an integrative approach by addressing the relevancy of potential applications of neuroscience in the fields of both criminal law and civil law. The course aims, inter alia, to assist students in critically reflecting on the present and future possibilities pertaining to the intersection between law and neuroscience. It also explores how neuroscientific research may challenge the foundations and conditions of criminal and civil (tort) liability. The main themes of the course include the following: the neuroscientific challenge to free will and responsibility; the scientific and legal view on human agency and personhood; diagnosing and assessing mental capacities and disabilities; legal decision-making and the use of neurological evidence in court; neuroscience and human rights and finally, the predictive and rehabilitative use of neuroscientific techniques. Upon completion of this course, the student must be able to:

- understand the basic conditions of criminal and private law liability
- understand the different philosophical positions on the free will and determinism debate
- reflect on the neuroscientific challenges to free will, human agency and legal responsibility;
- understand the relevance of neuroscientific techniques as a diagnostic tool in order to determine mental capacities and disabilities;
- understand how neurosciences can contribute to our knowledge of judicial decision making
- assess the value and limitations of neuroscientific evidence in court cases
- reflect on the value of neuroscientific techniques as a predictive tool for risk assessment
- reflect on the use of neuroscientific techniques (especially direct brain interventions) to modify the brain in order to enhance people’s responsibility

**Instruction language**
EN

**Prerequisites**
Although there are no prerequisites for this course, we expect good English language and writing skills. Also, some basic legal knowledge is necessary to understand the main topics of this course. Therefore, in the first week some introductory lectures will be given on the basic concepts of criminal and private law. In addition, students without any knowledge of law are required to study additionally chapters 2, 4, and 6 from J. Hage & B. Akkermans (eds), *Introduction to law*, Springer, 2014 and chapters 1, 3 and 6 from J. Keiler & D. Roef (eds.), *Comparative Concepts of Criminal Law*, Cambridge, Intersentia, 2016. This additional literature will be made available in a reader.

Students report spending an average of 12 hours for each session.
Recommended literature
The literature for this course consists of state-of-the-art articles on neurolaw. It is indicated for each session which reading materials should be studied beforehand.
Examples of relevant literature:

N. Vincent, ‘On the relevancy of neuroscience to criminal responsibility’, *Criminal Law and Philosophy*, 2009, 77-98;

Teaching methods
PBL-tutorials (7 sessions) and lectures

Assessment methods
written exam and paper
Neuropsychology and law

Course period
period I  startdate: 05-Sep-16  enddate: 28-Oct-16

Code
PSY3375

ECTS credits
6,0

Organisational unit
Faculty of Psychology and Neuroscience

Coordinator
Marko Jelicic

Description
The primary focus of this course is on the neurocognitive processes of criminal offenders. Contextual factors, such as the history and current state of neuropsychology and psychiatry, will be discussed to give students the prerequisite background knowledge of the topic. A considerable part of the course is devoted to neuropsychological abnormalities in criminal offenders who are affected by a psychiatric disorder. Attention will be given to the role of schizophrenia, bipolar disorder, and antisocial personality disorder and psychopathy. Another substantial part of the course pertains to offenders with an acquired brain injury. In this regard, traumatic brain injury, brain tumours as well as dementia will be addressed. The connection between neural abnormalities and criminal offences will be critically evaluated for each psychiatric or neurological disorder. A completely different side of neuropsychology and law, the effect of neurocognitive disorders in victims/witnesses of crimes on their eyewitness testimony, will also be dealt with.

Instruction language
EN

Prerequisites
Although there are no prerequisites for this course, some knowledge of neuroscience is necessary to understand the topics of this course. Therefore, in the first lecture a “crash course” on the structure and function of the brain will be given. In addition, students without any knowledge of neuroscience are advised to read introductory chapters on the structure and function of the brain in basic books on neuropsychology (e.g., from B. Kolb & I.Q. Wishaw, Fundamentals of Human Neuropsychology, 5th, 6th or 7th edition).

Students report spending an average of 12 hours for each session.

Recommended literature
The literature for this course consists of state-of-the-art articles on forensic neuropsychology and law (and related issues). It is indicated for each session which reading materials should be studied beforehand. Examples of relevant literature:


**Teaching methods**
PBL-tutorials (seven sessions) and lectures

**Assessment methods**
written exam and paper
Economic psychology

Course period
period II startdate: 31-Oct-16 enddate: 23-Dec-16

Code
EBC2103

ECTS credits
6,0

Organisational unit
School of Business and Economics (SBE)

Coordinator
Tony Williams

Description
This course draws inspiration from the phenomenon which sees economists increasingly discovering psychology as a means to enrich their models of economic behaviour and well-being and to give them a better foundation. It aims to introduce students to the key concepts and current issues of economic psychology. The first six sessions of the course address insights from psychology and behavioural economics associated with judgment and decision-making. Here, basic principles of rationality are compared with actual behaviour in decision-making. Building on these foundations, the course examines three current topics from the intersection of economics and psychology: behavioural policy intervention and neuroeconomics.

Instruction language
EN

Prerequisites
The course is taught in a self-contained manner. Basic familiarity with expected utility theory and statistical concepts (e.g., expected value) is very helpful but not necessary. Students report spending an average of 8 hours per week on the course

Recommended literature
The literature for this course consists of the main textbook (listed below), journal articles, and a few supplementary book chapters. It is indicated for each session which reading materials should be studied beforehand.
Main textbook:

Other representative literature:

Teaching methods
PBL-tutorials and lectures

Assessment methods
written exam, presentation, participation
Methodological, theoretical and practical aspects of research on human and legal decision-making and neurosciences

Course period
period II  startdate: 31-Oct-16   enddate: 23-Dec-16

Code
LAW3024

ECTS credits
6,0

Coordinator
Frans Leeuw / Alfons van Impelen

Organisational unit
Faculty of Law

Description
This course highlights the significance of collecting empirical evidence on neuroscientific factors and processes relevant for the study of human and legal decision-making. Data is generally collected using various instruments, such as neuropsychological assessments, brain imaging techniques as well as resting heart rate measurement. The acquisition of empirical evidence not only increases one's knowledge about these factors but also reduces the likelihood of reliance on 'neuro- myths'. This course not only discusses these and other techniques of data collection from different perspectives – methodology, applicability and ethical aspects – but also invites the students to work with some of these measurement instruments themselves and collect ‘real data’. Data collection in one way or another is related to models or theories about human and legal decision-making. During the course, several of these ‘models of man’ will be analyzed and confronted with sound evidence from research and with explanatory, theories about the role of neuroscientific factors in legal and human decision-making. Collaboration is foreseen with the WODC – also known as the National Institute for Applied Security and Justice Research – in particular in relation to its work on brain & cognition studies and the neurolaw database.

Instruction language
EN

Prerequisites
Although there are no prerequisites for this course, we expect good English language and writing skills. Furthermore, some basic knowledge of psychology, scientific methodology, and of neuroscience is useful to understand the topics of this course. Students who are not acquainted with these subjects are therefore required to study some introductory literature that will be made available during this course.

Students have reported spending an average of 12 hours for each session.

Recommended literature
The literature for this course consists of state-of-the-art articles on methodological aspects of neuroscientific research.

Examples of representative literature:

**Teaching methods**
PBL-tutorials (seven sessions) and lectures

**Assessment methods**
written exam and paper

For more information regarding the content of his minor, please contact david.roef@maastrichtuniversity.nl

Any questions regarding the formal registration procedure for this minor should be addressed to your home faculty as rules for permission to follow the minor (or to follow separate courses of this minor as an elective) may slightly differ in each faculty.