



UNIVERSITY OF RIJEKA

**Faculty of Humanities and Social Sciences**

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Division of Cognitive Sciences

**Masters in Cognitive Sciences:  
Cognition and the Mind**  
SYLLABUSES

Summer Semester Academic Year 2023/2024

Rijeka, July 2023

## LIST OF COURSES IN THE FIRST SEMESTER

### Mandatory courses

[Introduction to the Disciplines and Work in Cognitive Sciences](#)

[Interdisciplinary Modules in Cognitive Sciences 1](#)

[Statistics](#)

[Empirical Research Methods 1](#)

[Rotation project 1](#)

### Elective courses

[Academic English](#)

[Cognitive Linguistics](#)

[Introduction to Philosophy of Psychology and Neuroscience](#)

[Social Cognition: What Do We Know about Others' Minds?](#)

[Introduction to Individual Differences](#)

**NOTE:** The student is required to choose 3 ECTS points from the group of internal elective courses and/or *Communis* courses provided that they are held in English language.

## LIST OF COURSES IN THE SECOND SEMESTER

### Mandatory courses

[Interdisciplinary Modules in Cognitive Sciences 2](#)

[Ethics](#)

[Empirical Research Methods 2](#)

[Rotation project 2](#)

### Elective courses

[Current Issues in Empirical Cognitive Sciences](#)

[Open Science and Its Tools](#)

[Philosophy of Science](#)

[Foundations and Current Topics in Philosophy of Mind](#)

[Developing Minds](#)

**NOTE:** The student is required to choose 3 ECTS points from the group of internal elective courses, and/or *Communis* courses provided that they are held in English language.

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE	
Course title	Introduction to the Disciplines and Work in Cognitive Sciences
Study programme	Masters in Cognitive Sciences: Cognition and the Mind
Semester	1st
Academic year	2023/2024
ECTS credits	7
Contact hours (Lectures + Seminars + Practical work)	48+48+0
Time and venue of classes	TBC
Language of instruction	English
Course organisers	Dr. Petra Anić, Prof. Igor Bajšanski, Prof. Luca Malatesti
Course instructors	<b>Contact details</b>
Dr. Sandra Arbula	Email: <a href="mailto:saarbul@sissa.it">saarbul@sissa.it</a> (external collaborator)
Prof. Igor Bajšanski	Email: <a href="mailto:sibajsan@ffri.uniri.hr">sibajsan@ffri.uniri.hr</a> , Phone: 051/265-762, Office: F-347, Office hours: TBA
Dr. Zdenka Brzović	Email: <a href="mailto:zdenka@ffri.uniri.hr">zdenka@ffri.uniri.hr</a> , Phone: 051/265-795, Office: F-413, Office hours: TBA
Dr. Ivan Flis	Email: <a href="mailto:ivan.flis@uniri.hr">ivan.flis@uniri.hr</a> , Office: F-121, Office hours: TBA
Dr. Edward Legg	Email: <a href="mailto:edward.legg@uniri.hr">edward.legg@uniri.hr</a> , Phone: 051/699-217, Office: F-344, Office hours: TBA
Prof. Luca Malatesti	Email: <a href="mailto:lmalatesti@ffri.uniri.hr">lmalatesti@ffri.uniri.hr</a> , Phone: 051/265-650, Office: F-422, Office hours: TBA
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/699-217, Office: F-344, Office hours: TBA
Prof. Predrag Šustar	Email: <a href="mailto:psustar@ffri.uniri.hr">psustar@ffri.uniri.hr</a> Phone: 051/265-601, Office: F-413, Office hours: TBA
Dr. Oliver Tošković	Email: <a href="mailto:otoskovi@f.bg.ac.rs">otoskovi@f.bg.ac.rs</a> (external collaborator)
<b>I. DETAILED COURSE DESCRIPTION</b>	
<b>COURSE OVERVIEW</b>	

This is an intensive, introductory course that runs over the first 6 weeks in the first semester. The course has three objectives: i) to introduce you to the work in cognitive sciences, ii) to enable you to complement your knowledge from your undergraduate training, and iii) to introduce you to the different ways of learning and teaching involved in the Masters programme.

This course is divided into a compulsory component, an elective module (you choose one out of two modules), and elective elements (you choose two out of four elements). At the beginning of the course, our First Year Tutor will help you figure out how to choose the elective parts of the course.

### EXPECTED LEARNING OUTCOMES

Compulsory learning outcomes:

- describe and analyse disciplines and areas within cognitive sciences,
- compare different approaches and methods within cognitive sciences,
- analyse concepts connecting different disciplines.

Elective learning outcomes:

Module „Introduction to empirical cognitive sciences“:

- visualise and use descriptors for specific data distributions,
- describe and visualise relationships between a set of variables,
- describe the foundations of empirical research in cognitive sciences.

Module „Introduction to philosophy of cognitive sciences“:

- competently read contemporary philosophical literature from philosophy of mind and philosophy of cognitive sciences,
- use informal logic, thought experiments, and conceptual analysis for evaluating philosophical texts, describe the most significant philosophical problems arising from research in cognitive sciences,
- evaluate philosophical views related to types of explanations in cognitive sciences,
- independently read and analyse original works in philosophy of science and philosophy of special sciences,
- defend different philosophical positions within debates in contemporary philosophy of science.

Elective elements:

- analyse concepts and approaches of research within a selected area,
- identify and formulate major issues and discussions within a selected area.

### WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')

Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
x		x	

### II. COURSE EVALUATION AND GRADING CRITERIA

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	3.2	
Class Participation	3.8	N/A
<b>TOTAL</b>	<b>7</b>	<b>N/A</b>

This course is not graded. However, students must actively participate in this course to be able to progress to the other courses that follow this introductory course.

**Class participation:** Lectures will have interactive elements and seminars may involve reading of literature, discussions, short writing assignments, short presentations.

### III. READING

#### MANDATORY READING

- Shaughnessy, J.J., Zechmeister, E.B. & Zechmeister, J.S. (2012). *Research methods in psychology* (9th ed.). McGraw-Hill.
- Weiskopf, D.A., & Adams, F. (2015). *An introduction to the philosophy of psychology*. Cambridge University Press. [Selected chapters].
- Fosl, P.S., & Baggini, J. (2020). *The philosopher's toolkit: A compendium of philosophical concepts and methods*.
- Martinich, A. (2001). *Philosophical writing: An introduction* (3rd ed.) Blackwell.
- Bear, F.M., Connor, B.W., & Paradiso, M.A. (2016). *Neuroscience exploring the brain*. Philadelphia: Wolters Kluwer.
- Kolb, B. & Whishaw, I.Q. (2003). *Fundamentals of Human Neuropsychology*. New York: W.H. Freeman and Company.
- Field, A., Miles, M., & Field, Z. (2012). *Discovering Statistics Using R*. Sage Publications.
- King, B.M., Rosopa, P.J., & Minium, E.W. (2011). *Statistical Reasoning in the Behavioral Sciences* (6th ed.) John Wiley & Sons, Inc.
- Olmstead, M.C. & Kuhlmeier, V. (2015). *Comparative cognition*. Cambridge University Press.
- Heyes, C. (2012). Simple minds: a qualified defence of associative learning. *Proceedings of the Royal Society B*, 367, 2697-2703. <https://doi.org/10.1098/rstb.2012.0217>
- Andrews, K. (2020). *How to study animal minds*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781108616522>
- Miller, G.A. (2003). The cognitive revolution: a historical perspective. *Trends in Cognitive Sciences*, 7(3), 141-144. [https://doi.org/10.1016/S1364-6613\(03\)00029-9](https://doi.org/10.1016/S1364-6613(03)00029-9)
- Greenwood, J.D. (1999). Understanding the "cognitive revolution" in psychology. *Journal of the History of the Behavioral Sciences*, 35(1), 1-22. [https://doi.org/10.1002/\(SICI\)1520-6606\(199924\)35:1<1::AID-JHBS1>3.0.CO;2-4](https://doi.org/10.1002/(SICI)1520-6606(199924)35:1<1::AID-JHBS1>3.0.CO;2-4)
- Cohen-Cole, J. (2014). *The open mind: Cold War politics and the sciences of human nature*. University of Chicago.
- Eysenck, M.W. & Keane, M.T. (2007). Psychology Press.
- Okasha, Samir (2004). *Philosophy of Science: A Very Short Introduction*. Oxford University Press.
- Kitcher, P. & Barker, G. (2014). *Philosophy of Science: A New Introduction*. Oxford University Press.
- Godfrey-Smith, Peter (2003). *Theory and Reality: An Introduction to the Philosophy of Science*. Chicago University Press.

#### RECOMMENDED FURTHER READING

- Bermudez, J. L. ed. (2006). *Philosophy of psychology: contemporary readings*. New York and London: Routledge.
- Weiskopf, D. and Adams, F. (2015). *An introduction to the philosophy of psychology*. Cambridge: Cambridge University Press
- Borsboom, D. (2005). *Measuring the mind: conceptual issues in contemporary psychometrics*. Cambridge: Cambridge University Press.
- Crane, T. 2001. *The Elements of Mind: An Introduction to the Philosophy of Mind*. Oxford: Oxford University Press. (str. 34-58).
- Okasha, S. (2019). *Philosophy of Biology: A Very Short Introduction*. Oxford University Press.
- Godfrey-Smith, P. (2014). *Philosophy of Biology*. Princeton University Press.
- Shettleworth, S. J. (2009). *Cognition, evolution, and behavior*. Oxford University Press.
- Pearce, J. M. (2013). *Animal learning and cognition: An introduction*. Psychology Press.

#### IV. ADDITIONAL INFORMATION

##### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>	
Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.	
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>	
Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange a meeting.	
<b>INFORMATION ABOUT THE FINAL EXAM</b>	
There is no final exam for this course.	
<b>OTHER RELEVANT INFORMATION</b>	
<b>Academic honesty</b> Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.	
<b>V. COURSE OUTLINE</b>	
<b>DATE</b>	<b>TOPIC</b>
<b>Week 1</b>	
Day 1	Introduction to the programme and the course Instructor: Ljerka Ostojić  Students will choose their elective module and elective elements and receive detailed information about their schedule and modules and elements.
Day 2	Cognitive Sciences Instructors: Igor Bajšanski, Edward Legg
Day 3	Cognitive Sciences Instructors: Igor Bajšanski, Edward Legg
Day 4	Interdisciplinarity in Cognitive Sciences Instructors: Igor Bajšanski, Edward Legg
Day 5	Interdisciplinarity in Cognitive Sciences Instructors: Igor Bajšanski, Edward Legg, Ivan Flis
<b>Week 2</b>	
Day 1	Working with Scientific Literature Instructor: Ljerka Ostojić
Day 2	Elective Module*
Day 3	Elective Module *
Day 4	Elective Element 1**
<b>Week 3</b>	
Day 1	Elective Element 1**
Day 2	Elective Module*
Day 3	Elective Module*
Day 4	Elective Element 1**
<b>Week 4</b>	
Day 1	Elective Element 1**
Day 2	Elective Module*
Day 3	Elective Module*
Day 4	Elective Element 2**
<b>Week 5</b>	
Day 1	Elective Element 2**

Day 2	Elective Module*
Day 3	Elective Module*
Day 4	Elective Element 2**
<b>Week 6</b>	
Day 1	Elective Element 2**
Day 2	Elective Module*
Day 3	Elective Module*

\* If you choose the elective module *Introduction to empirical cognitive sciences*, there are two parts to this module:  
 1) *Introduction to statistics* (instructor: Oliver Tošković - online or in person) and  
 2) *Introduction to empirical research methods* (instructor: Ljerka Ostojić).

If you choose the elective module *Introduction to the philosophy of cognitive sciences*, there are three parts to this module:  
 1) *Introduction to philosophy of cognitive sciences* (instructor: Luca Malatesti),  
 2) *Introduction to philosophical research methods* (instructors: Luca Malatesti, Zdenka Brzović, Predrag Šustar), and  
 3) *Introduction to philosophy of science* (Zdenka Brzović, Predrag Šustar).

\*\* You chose two out of four elective modules available:

1. *Cognitive Psychology* (instructor: Igor Bajšanski),
2. *Neuropsychology and cognition* (instructor: Sandra Arbula),
3. *Comparative cognition* (instructor: Ljerka Ostojić), and
4. *Critical history of cognitive science and its methods* (instructor: Ivan Flis).

LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES
Compulsory learning outcome: describe and analyse disciplines and areas within cognitive sciences	Introduction to cognitive sciences, Interdisciplinarity in cognitive sciences	Lectures, Seminars, Discussions
Compulsory learning outcome: compare different approaches and methods within cognitive sciences	Introduction to cognitive sciences, Interdisciplinarity in cognitive sciences	Lectures, Seminars, Discussions
Compulsory learning outcome: analyse concepts connecting different disciplines	Introduction to cognitive sciences, Interdisciplinarity in cognitive sciences	Lectures, Seminars, Discussions
Elective learning outcome: visualise and use descriptors for specific data distributions	Statistics	Lectures, Seminars
Elective learning outcome: describe and visualise relationships between a set of variables	Statistics	Lectures, Seminars
Elective learning outcome: describe the foundations of empirical research in cognitive sciences	Empirical research methods	Lectures, Seminars

Elective learning outcome: competently read contemporary philosophical literature from philosophy of mind and philosophy of cognitive sciences	Philosophy of mind, Philosophy of cognitive sciences	Seminars
Elective learning outcome: use informal logic, thought experiments, and conceptual analysis for evaluating philosophical texts, describe the most significant philosophical problems arising from research in cognitive sciences	Philosophical research methods, Philosophy of science, Philosophy of cognitive science, Philosophy of mind	Lectures, Seminars, Discussions
Elective learning outcome: evaluate philosophical views related to types of explanations in cognitive sciences	Philosophy of mind, Philosophy of mind, Philosophy of cognitive science	Lectures, Seminars, Discussions
Elective learning outcome: independently read and analyse original works in philosophy of science and philosophy of special sciences	Philosophical research methods, Philosophy of science, Philosophy of cognitive science, Philosophy of mind	Seminars
Elective learning outcome: defend different philosophical positions within debates in contemporary philosophy of science	Philosophical research methods, Philosophy of science, Philosophy of cognitive science, Philosophy of mind	Lectures, Seminars, Discussions
Elective learning outcome: Elective elements: analyse concepts and approaches of research within a selected area	Cognitive psychology, Comparative cognition, Neuropsychology and cognition, Critical history of cognitive science and its methods	Lectures, Seminars, Discussions
Elective learning outcome: identify and formulate major issues and discussions within a selected area	Cognitive psychology, Comparative cognition, Neuropsychology and cognition, Critical history of cognitive science and its methods	Lectures, Seminars, Discussions



## SYLLABUS

KEY INFORMATION ABOUT THE COURSE	
Course title	Interdisciplinary Modules in Cognitive Sciences 1
Study programme	Masters in Cognitive Sciences: Cognition and the Mind
Semester	1st
Academic year	2023/2024
ECTS credits	6
Contact hours (Lectures + Seminars + Practical work)	26+13+0
Time and venue of classes	TBC
Language of instruction	English
Course organisers	Prof. Igor Bajšanski, Dr. Marko Jurjako
Course instructors	<b>Contact details</b>
Prof. Igor Bajšanski	Email: <a href="mailto:sibajsan@ffri.uniri.hr">sibajsan@ffri.uniri.hr</a> , Phone: 051/265-762, Office: F-347 , Office Hours: TBA
Prof. Dražen Domijan	Email: <a href="mailto:drazen.domijan@ffri.uniri.hr">drazen.domijan@ffri.uniri.hr</a> , Phone: 051/265-758, Office: F-334, Office Hours: TBA
Dr. Ivan Flis	Email: <a href="mailto:ivan.flis@ffri.uniri.hr">ivan.flis@ffri.uniri.hr</a> , Office: F-121, Office Hours: TBA
Dr. Marko Jurjako	Email: <a href="mailto:mjurjako@ffri.uniri.hr">mjurjako@ffri.uniri.hr</a> , Phone: 051/669-210, Office: F-415, Office Hours: TBA
Dr. Mia Šetić Beg	Email: <a href="mailto:mia.setic@unicath.hr">mia.setic@unicath.hr</a> (external collaborator)
I. DETAILED COURSE DESCRIPTION	
COURSE OVERVIEW	
<p>In this course, you will gain knowledge of selected topics from cognitive sciences from a disciplinary and interdisciplinary perspective. In addition to interactive lectures, we will have interdisciplinary moderated discussion groups. For some of these, your lecturers will select the literature, for others you will be able to select topics and papers of your interest. In addition, we will have invited lecturers for specific topics.</p>	
EXPECTED LEARNING OUTCOMES	
<ul style="list-style-type: none"> <li>● synthesise results and insights from selected areas,</li> <li>● consider and compare theories and models within selected areas,</li> <li>● critically evaluate claims of empirical research from selected areas,</li> <li>● analyse interdisciplinary links between disciplines and areas.</li> </ul>	
WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')	

Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	

## II. COURSE EVALUATION AND GRADING CRITERIA

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	1.3	
Class participation	0.7	35
Essay	2	35
Written Exam	2	30
<b>TOTAL</b>	<b>6</b>	<b>100</b>

To obtain a grade on this course, students must i) participate in class discussions and other tasks during classes (maximum points available: 35), ii) submit one essay per module for four modules (maximum points available: 35), and iii) write an essay-style exam at the end of the term (maximum points available: 30).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

## III. READING

### MANDATORY READING

- Frodeman, R., Klein, J.T., & Pacheco, R.C.D.S. (Eds). (2017). *The Oxford handbook of interdisciplinarity*. Oxford University Press.
- Dennett, D.C. (1981). True believers: the intentional strategy and why it works. In Chalmers (2002). *Philosophy of Mind: classical and contemporary readings*. Oxford University Press.
- Gentner, D. (2010). Psychology in cognitive science: 1987-2038. *Topics in Cognitive Science*, 2(3), 328-344.
- Van Eck, N.J. & Waltman, L. (2014). CitNetExplorer: A new software tool for analyzing and visualizing citation networks. *Journal of Informetrics*, 8(4), 802-823. <https://doi.org/10.1016/j.joi.2014.07.006>
- Dehaene, S. (2009). Origins of mathematical intuitions: the case of arithmetic. *Annals of the New York Academy of Sciences*, 1156, 232-259. <https://doi.org/10.1111/j.1749-6632.2009.04469.x>
- Nieder, A., & Dehaene, S. (2009). Representation of number in the brain. *Annual Review of Neuroscience*, 32, 185-208. <https://doi.org/10.1146/annurev.neuro.051508.135550>
- Cavanagh, P. (2011). Visual cognition. *Vision Research*, 51(13), 1538-1551. <https://doi.org/10.1016/j.visres.2011.01.05>
- Franconeri, S.L., Alvarez, G.A., & Cavanagh, P. (2013). Flexible cognitive resources: competitive content maps for attention and memory. *Trends in Cognitive Sciences*, 17(3), 134-141. <https://doi.org/10.1016/j.tics.2013.01.010>
- Roelfsema, P.R., & Houtkamp, R. (2011). Incremental grouping of image elements in vision. *Attention, Perception & Psychophysics*, 73(8), 2542-2572. <https://doi.org/10.3758/s13414-011-0200-0>
- Samuels, R., Stich, S., & Bishop, M. (2002). Ending the rationality wars: how to make disputes about human rationality disappear. In R. Eliso (Ed.), *Common Sense, Reasoning, and Rationality*. Oxford University Press.
- Evans, J.St.B.T. & Stanovich, K.E. (2013). Dual-process theories of higher cognition advancing the debate. *Perspectives on Psychological Science*, 8(3), 223-241. <https://doi.org/10.1177/1745691612460685>
- Pennycook, G., Fugelsang, J.A., & Koehler, D.J. (2015). What makes us think? A three-stage dual-process model of analytic engagement. *Cognitive Psychology*, 80, 34-72. <https://doi.org/10.1016/j.cogpsych.2015.05.001>
- Stanovich, K.E. & West, R.F. (2000). Individual differences in reasoning: implications for the rationality debate.

*Behavioral & Brain Sciences*, 23, 645-726. <https://doi.org/10.1017/S0140525X0028343X>

- Tversky, A. & Kahneman, D. (1974). Judgement under uncertainty: Heuristics and biases. *Science*, 185, 1124-1131. <https://doi.org/10.1126/science.185.4157.1124>

#### RECOMMENDED FURTHER READING

- Cohen Kadosh, R., & Dowker, A. (2015). *The Oxford handbook of numerical cognition*. New York: Oxford University Press.
- Fischer, M. H. & Shaki, S. (2014). Spatial associations in numerical cognition – from single digits to arithmetic. *Quarterly Journal of Experimental Psychology*, 67(8), 1461-1483. <https://doi.org/10.1080/17470218.2014.927515>
- De Neys, W. & Glumicic, T. (2008). Conflict monitoring in dual process theories of reasoning. *Cognition*, 106, 1248-1299. <https://doi.org/10.1016/j.cognition.2007.06.002>
- Dehaene, S. (2011). *The number sense. 2nd ed.* New York: Oxford University Press.
- Coltheart, V. (2010). *Tutorials in visual cognition*. New York: Psychology Press. Ross, B.H., & Irwin, D. (2013). *Cognitive vision*. Amsterdam: Elsevier Science.

#### IV. ADDITIONAL INFORMATION

##### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

##### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

##### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange a meeting.

##### INFORMATION ABOUT THE FINAL EXAM

The final exam is an essay-style exam in which students will choose two out of four given questions.

##### OTHER RELEVANT INFORMATION

###### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

##### EXAM DATES

Winter	2 February 2024 16 February 2024
Spring supplementary	19 April 2024
Summer	N/A
Autumn supplementary	6 September 2024 13 September 2024

#### V. COURSE OUTLINE

DATE	TOPIC
Week 7	Introductory Module: Inter-/Trans-/Multidisciplinarity and Cognitive Sciences Instructor: Ivan Flis
Week 8	Module 1: Numerical Cognition: Cognitive foundations of numerical cognition Instructor: Mia Šetić Beg
Week 9	Module 1: Numerical Cognition: Neuronal foundations of numerical cognition Instructor: Mia Šetić Beg

Week 10	Module 2: Visual Cognition: Object recognition Instructor: Dražen Domijan
Week 11	Module 2: Visual Cognition: Visual selective attention Instructor: Dražen Domijan
Week 12	Module 3: Judgement and Reasoning Instructors: Igor Bajšanski, Pavle Valerjev
Week 13	Module 3: Judgement and Reasoning Instructors: Igor Bajšanski, Pavle Valerjev
Week 14	Module 4: Rationality Instructors: Marko Jurjako, Igor Bajšanski
Week 15	Module 4: Rationality Instructors: Marko Jurjako, Igor Bajšanski

**VI. CONSTRUCTIVE ALIGNMENT**

LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Synthesise results and insights from selected areas	Interdisciplinarity, visual cognition, numerical cognition, judgement and reasoning, rationality	Lectures and seminars for all modules	Class Participation (discussion), essays, written exam
Consider and compare theories and models within selected areas	Visual cognition, numerical cognition, judgement and reasoning	Lectures and seminars for modules 1-3	Class Participation (discussion), essays, written exam
Critically evaluate claims of empirical research from selected areas	Visual cognition, numerical cognition, judgement and reasoning, rationality	Lectures and seminars for modules 1-4	Class Participation (discussion), essays, written exam
Analyse interdisciplinary links between disciplines and areas	Interdisciplinarity, visual cognition, numerical cognition, judgement and reasoning, rationality	Lectures from the Introductory Module, Seminars for all five modules	Class Participation (discussion), essays, written exam

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Statistics		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	1st		
Academic year	2023/2024		
ECTS credits	5		
Contact hours (Lectures + Seminars + Practical work)	18+0+18		
Time and venue of classes	TBC		
Language of instruction	English		
Course organisers	Petra Anić		
Course instructors	Contact details		
Marko Tončić	Email: <a href="mailto:mtoncic@ffri.uniri.hr">mtoncic@ffri.uniri.hr</a> , Phone: 051/265-769, Office: F-369, Office hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>The aim of the course is to enable you to work with empirical data and plan and perform statistical analyses. During this course, we will, wherever possible, use open-source software for all data manipulations and analyses to ensure that you can transfer the acquired skills and knowledge to your future work.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• use R to manipulate data files,</li> <li>• use R to visualise data (1D, 2D, 3D)</li> <li>• use R for modelling continuous and categorical outcome variables,</li> <li>• apply and interpret basic linear models for continuous and categorical variables,</li> <li>• apply basic methods of modelling the structure of relationships between variables (PATH, SEM),</li> <li>• explain and interpret results of hierarchical linear models,</li> <li>• apply the acquired methods in own research.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x	x	x
Fieldwork	Laboratory work	Mentoring	Other
		x	
II. COURSE EVALUATION AND GRADING CRITERIA			

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	1.2	
Class participation	0.5	10
Seminar paper	1.5	40
Written exam	0.9	30
Oral exam	0.9	20
<b>TOTAL</b>	<b>4</b>	<b>100</b>
<p>To obtain a grade on this course, students must i) actively engage in the class (maximum points; 10), ii) submit a seminar paper (maximum points: 50), iii) pass a written exam (maximum points: 30) and oral exam (maximum points: 20).</p> <p>Detailed information about all graded elements will be given and discussed in the first lecture.</p> <p>Final grades will be determined as follows:</p>		
<b>GRADE</b>	<b>UNDEGRADUATE AND GRADUATE PROGRAMMES</b>	
5 (A)	90 – 100 % points	
4 (B)	75 – 89.9 % points	
3 (C)	60 – 74.9 % points	
2 (D)	50 – 59.9 % points	
1 (F)	0 – 49.9 % points	
<b>III. READING</b>		
<b>MANDATORY READING</b>		
<ul style="list-style-type: none"> <li>Judd, C.M., McClelland, G.H., &amp; Ryan, C.S. (2017). <i>Data Analysis: A model comparison approach to regression, ANOVA, and beyond</i>. Routledge/Taylor &amp; Francis Group.</li> <li>Maindonald, J. &amp; Braun, J.W. (2010). <i>Data Analysis and Graphics Using R – an Example-Based Approach</i>. Cambridge University Press</li> <li>Miles, J. &amp; Shevlin, M. (2001). <i>Applying Regression &amp; Correlation</i>. SAGE Publications.</li> </ul>		
<b>RECOMMENDED FURTHER READING</b>		
<ul style="list-style-type: none"> <li>Agresti, A. (1996). <i>Categorical Data Analysis</i>. John Wiley &amp; Sons, Inc.</li> <li>Crawley, M.J. (2007). <i>The R book</i>. John Wiley &amp; Sons.</li> <li>Field, A., Miles, J., &amp; Field, Z. (2012). <i>Discovering Statistics Using R</i>. Sage Publications.</li> <li>Pinheiro, J.C. &amp; Bates, D.M. (2000). <i>Mixed-effects models in S and S-PLUS</i>. Springer</li> </ul>		
<b>IV. ADDITIONAL INFORMATION</b>		
<b>ATTENDANCE</b>		
Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.		
<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>		
Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.		
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>		
Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact the lecturer in advance to arrange for a meeting.		
<b>INFORMATION ABOUT THE FINAL EXAM</b>		
Students must pass a written and an oral exam.		
<b>OTHER RELEVANT INFORMATION</b>		

<b>Academic honesty</b>			
Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.			
<b>EXAM DATES</b>			
Winter	1 February 2024 15 February 2024		
Spring supplementary	16 April 2024		
Summer	N/A		
Autumn supplementary	3 September 2024 10 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 7	Course introduction; Basic data manipulation in R		
Week 8	Statistical models; GLM; Categorical predictors (ANOVA models)		
Week 9	GLM; multi-parameter GLM		
Week 10	GLM; Curve estimation (polynomial models)		
Week 11	Data visualization (1D, 2D, 3D)		
Week 12	Binomial outcome models: logistic regression		
Week 13	HLM (hierarchical linear models): introduction		
Week 14	SEM: introduction		
Week 15	SEM: PATH models; Data visualization (structure graphs)		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Use R to manipulate data files	Basic data manipulation in R	Lectures, Practical work, Independent work	Exam (written and oral); Seminar paper
Use R to visualise data (1D, 2D, 3D)	Data visualization	Lectures, Practical work, Independent work	Exam (written and oral; problem solving task); Seminar paper
Use R for modelling continuous and categorical outcome variables	One parameter GLM; GLM; Categorical predictors; GLM; Curve estimation; GLM; multi-parameter GLM	Lectures, Practical work, Independent work	Exam (written and oral); Seminar paper
Apply and interpret basic linear models for continuous and categorical variables	One parameter GLM; GLM; Categorical predictors; GLM; Curve estimation; GLM; multi-parameter GLM; Binomial outcome models: logistic regression	Lectures, practical work, Independent work	Exam (written and oral); Seminar paper
Apply basic methods of modelling the structure of relationships between	SEM: introduction SEM: PATH models	Lectures, Practical work, Independent work	Exam (written and oral); Seminar paper

variables (PATH, SEM)			
Explain and interpret results of hierarchical linear models	HLM: introduction HLM: random intercept, slopes	Lectures, Practical work, Independent work	Exam (written and oral); Seminar paper
Apply the acquired methods in own research	All topics	Lectures, Practical work, Independent work	Self-Evaluation



## SYLLABUS

KEY INFORMATION ABOUT THE COURSE	
Course title	Empirical Research Methods 1
Study programme	Masters in Cognitive Sciences: Cognition and the Mind
Semester	1st
Academic year	2023/2024
ECTS credits	5
Contact hours (Lectures + Seminars + Practical work)	18+18+0
Time and venue of classes	TBC
Language of instruction	English
Course organisers	Prof. Dražen Domijan, Dr. Tamara Mohorić
Course instructors	<b>Contact details</b>
Dr. Sandra Arbula	Email: <a href="mailto:saarbul@sissa.it">saarbul@sissa.it</a> (external collaborator)
Prof. Dražen Domijan	Email: <a href="mailto:drazen.domijan@ffri.uniri.hr">drazen.domijan@ffri.uniri.hr</a> , Phone: 051/265-758, Office: F-334, Office hours: TBA
Dr. Tamara Mohorić	Email: <a href="mailto:tmohoric@ffri.uniri.hr">tmohoric@ffri.uniri.hr</a> , Phone: 051/265-774, Office: F-335, Office Hours: TBA
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA
I. DETAILED COURSE DESCRIPTION	
<b>COURSE OVERVIEW</b>	
<p>In this course, you will familiarise yourself with different theoretical approaches in the study of the mind and methods of model construction, experimental research and neuroscience research methods.</p>	
<b>EXPECTED LEARNING OUTCOMES</b>	
<ul style="list-style-type: none"> <li>• describe and compare different theoretical approaches in cognitive sciences (symbolic, neural, statistical models),</li> <li>• describe and compare procedures for constructing cognitive models,</li> <li>• analyse experimental research designs and compare their methodological features,</li> <li>• interpret interaction terms in complex experimental designs,</li> <li>• design experimental studies for different research questions,</li> <li>• select and devise an appropriate method when planning and conducting research,</li> <li>• describe and analyse the main measurement theories,</li> <li>• evaluate discussions on validity and reliability,</li> </ul>	

- describe and evaluate neuroscience methods.

**WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')**

Lectures	Seminars	Practical work	Independent work
x	x		
Fieldwork	Laboratory work	Mentoring	Other
			x

**II. COURSE EVALUATION AND GRADING CRITERIA**

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	1.2	
Class participation	0.5	10
Seminar paper	1.5	50
Written exam	0.9	20
Oral exam	0.9	20
<b>TOTAL</b>	<b>6</b>	<b>100</b>

To obtain a grade on this course, students must i) actively engage in classes (maximum points: 10), ii) submit one seminar paper (maximum points: 50), and iii) pass a written and oral exam (written exam, maximum points: 20, oral exam, maximum points: 20).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

**III. READING**

**MANDATORY READING**

- Bermúdez, J. (2016). *Cognitive science: An introduction to the science of the mind* (2nd ed.). Cambridge University Press.
- Shaughnessy, J. J., Zechmeister, E. B. i Zechmeister, J. S. (2012). *Research methods in psychology* (9th ed.). McGraw-Hill.

**RECOMMENDED FURTHER READING**

- Wagenmakers, E.-J. (2018). *Stevens' handbook of experimental psychology and cognitive neuroscience. Volume 5: Methodology* (4th ed.). John Wiley & Sons.
- Dienes, Z. (2008). *Understanding psychology as a science: An introduction to scientific and statistical inference*. Palgrave Macmillan.
- Stanovich, K. E. (2013). *How to think straight about psychology* (10th ed.). Pearson Education.
- Sun, R. (2008). *The Cambridge handbook of computational psychology*. Cambridge University Press.

**IV. ADDITIONAL INFORMATION**

**ATTENDANCE**

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.			
<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>			
Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.			
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>			
Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange for a meeting.			
<b>INFORMATION ABOUT THE FINAL EXAM</b>			
Students must pass a written and an oral exam.			
<b>OTHER RELEVANT INFORMATION</b>			
<b>Academic honesty</b> Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.			
<b>EXAM DATES</b>			
Winter	7 February 2024 21 February 2024		
Spring supplementary	17 April 2024		
Summer	N/A		
Autumn supplementary	4 September 2024 11 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 7	Module 1: Theory and model construction Instructor: Dražen Domijan		
Week 8	Module 1: Theory and model construction Instructor: Dražen Domijan		
Week 9	Module 2: Measurement theories Instructor: Tamara Mohorić		
Week 10	Module 2: Measurement theories Instructor: Tamara Mohorić		
Week 11	Module 3: Experimental Research Methods Instructor: Ljerka Ostojić		
Week 12	Module 3: Experimental Research Methods Instructor: Ljerka Ostojić		
Week 13	Module 3: Experimental Research Methods Instructor: Ljerka Ostojić		
Week 14	Module 4: Neuroscience Methods Instructor: Sandra Arbula		
Week 15	Module 4: Neuroscience Methods Instructor: Sandra Arbula		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>

Describe and compare different theoretical approaches in cognitive sciences (symbolic, neural, statistical models)	Theory and model construction	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Describe and compare procedures for constructing cognitive models	Theory and model construction	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Analyse experimental research designs and compare their methodological features	Experimental Research Methods	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Interpret interaction terms in complex experimental designs	Complex experimental research designs, interaction terms	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Design experimental studies for different research questions	Experimental Research Methods	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Select and devise an appropriate method when planning and conducting research	Experimental Research Methods	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Describe and analyse the main measurement theories	Measurement theories, Validity, Reliability	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Evaluate discussions on validity and reliability	Measurement theories, Validity, Reliability	Lectures, Seminars	Seminar paper, Written exam, Oral exam
Describe and evaluate neuroscience methods	Neuroscience methods, Signal processing	Lectures, Seminars	Seminar paper, Written exam, Oral exam

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Rotation project 1		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	1st		
Academic year	2023/2024		
ECTS credits	4		
Contact hours (Lectures + Seminars + Practical work)	2+6+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organisers	Dr. Ljerka Ostojić		
Course instructors	Contact details		
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: 344, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>In this course, you will choose one of the offered topics and, independently and with your supervisor, plan and design a study. The aim of the course is to think about the importance of early stages of research, thus the emphasis will be on planning and structuring the research: for empirical projects, this will include planning statistical analysis but will not include data collection, and for theoretical projects, this will focus on structuring and planning the project.</p> <p>This semester, you will be asked to especially focus on the research design and planning of statistical analyses. Thus, the rotation project will give you the opportunity to apply knowledge and skills from the <i>Empirical Research Methods 1</i> and <i>Statistics</i> courses.</p> <p>In addition, we will organise several workshops with external collaborators and invited lecturers.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• select and adapt research designs according to a research question,</li> <li>• explain and argue the choice of research design according to a research question,</li> <li>• critically assess possible claims based on the planned study.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	x
II. COURSE EVALUATION AND GRADING CRITERIA			

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	0.27	
Project	2	50
Seminar paper	1.73	50
<b>TOTAL</b>	<b>4</b>	<b>100</b>

To obtain a grade on this course, students must i) choose and conduct one rotation project (maximum points: 50) and ii) submit a seminar paper (rotation project report; maximum points: 50).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Forstmeier, W., Wagenmakers, E. J., & Parker, T. H. (2017). Detecting and avoiding likely false-positive findings – a practical guide. *Biological Reviews*, 92(4), 1941-1968.
- Allen, C. & Mehler, D.M. (2019). Open science challenges, benefits and tips in early career and beyond. *PLoS Biology*, 17, e3000246.
- Munro, K. J., & Prendergast, G. (2019). Encouraging pre-registration of research studies. *International Journal of Audiology* 58

#### RECOMMENDED FURTHER READING

- Haven, T. L., & Van Grootel, D. L. (2019). Preregistering qualitative research. *Accountability in Research*, 26(3), 229-244.
- Ledgerwood, A. (2018). The preregistration revolution needs to distinguish between predictions and analyses. *Proceedings of the National Academy of Sciences*, 115(45), E10516-E10517.

### IV. ADDITIONAL INFORMATION

#### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

#### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

#### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact the lecturer in advance to arrange a meeting.

#### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

#### OTHER RELEVANT INFORMATION

##### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

EXAM DATES			
Winter	3 January 2024 14 February 2024		
Spring supplementary	17 April 2024		
Summer	N/A		
Autumn supplementary	4 September 2024 11 September 2024		
V. COURSE OUTLINE			
DATE	TOPIC		
Week 7	Introduction to the course (choosing of topics, preparing for the rotation project) (1S)		
Week 8			
Week 9	Workshop 1*: Open Science and pre-registrations (1L+2S)		
Week 10			
Week 11	Workshop 2*: Analysis plans (1L+2S)		
Week 12			
Week 13			
Week 14			
Week 15	Final discussion (1S)		
* Workshops are organised with external collaborators or invited lecturers, thus the dates may change. Workshops will either be held in person or online.			
VI. CONSTRUCTIVE ALIGNMENT			
LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Select and adapt research designs according to a research question	Selected project area, Open Science, Pre-registration	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper
Explain and argue the choice of research design according to a research question	Selected project area, Open Science, Pre-registration	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper
Critically assess possible claims based on the planned study	Selected project area, Open Science, Pre-registration	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Academic English		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	1st		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	5+15+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser	Irena Vodopija-Krstanović		
Course instructor	Contact details		
Ivana Edmonds	Email: <a href="mailto:ivana.edmonds@pravri.uniri.hr">ivana.edmonds@pravri.uniri.hr</a> (external collaborator)		
I. DETAILED COURSE DESCRIPTION			
COURSE OVERVIEW			
<p>This course will provide you with additional English language support in all areas of the academic environment: reading, writing, listening, and speaking.</p>			
EXPECTED LEARNING OUTCOMES			
<ul style="list-style-type: none"> <li>• read technical and scientific literature,</li> <li>• listen to lectures and talks and take notes,</li> <li>• present their own arguments,</li> <li>• prepare and orally present technical and scientific topics,</li> <li>• plan and write a structured text,</li> <li>• summarise and critically evaluate written academic texts,</li> <li>• paraphrase texts,</li> <li>• use academic discourse,</li> <li>• reflect on their own skills, recognise areas for improvements and identify useful resources.</li> </ul>			
WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	x
II. COURSE EVALUATION AND GRADING CRITERIA			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	



<b>Class attendance</b>	0.67	
<b>Class participation</b>	1	<b>35</b>
<b>Continuous assessment</b>	1.33	<b>65</b>
<b>TOTAL</b>	<b>3</b>	<b>100</b>

To obtain a grade for this course, students must i) actively participate in classes (maximum points: 35) and ii) pass all continuous assessment components (maximum points: 65).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

<b>GRADE</b>	<b>UNDEGRADUATE AND GRADUATE PROGRAMMES</b>
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Moore, J. (2017) Oxford Academic Vocabulary Practice: Upper-intermediate. Oxford University Press.
- Swales, J. M., Feak, C. (2012) Academic Writing for Graduate Students: Essential Tasks and Skills. Michigan: University of Michigan.
- McCarthy, P., Hatcher, C. (2002) Presentation Skills: Essential Guide for Students: New Delhi: Sage Publications.

#### RECOMMENDED FURTHER READING

- Hewings, M. Thaine, C., McCarthy, M. (2012) Cambridge Academic English C1 Advanced Student's Book: An Integrated Skills Course for EAP. Cambridge: CUP.

### IV. ADDITIONAL INFORMATION

#### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

#### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

#### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructor in and after class, contact them over email or arrange an appointment to meet with them.

#### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

#### OTHER RELEVANT INFORMATION

##### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

#### EXAM DATES

Winter	1 February 2024 15 February 2024
Spring supplementary	18 April 2024

Summer	N/A		
Autumn supplementary	5 September 2023 12 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 7	An approach to academic writing		
Week 8	General-specific/Specific-general texts		
Week 9	Various technical and scientific texts Academic and language terms		
Week 10	Various technical and scientific texts Collocations		
Week 11	Data commentary Constructing a research paper		
Week 12	Writing summaries Writing critiques Analysis and evaluation		
Week 13	Paraphrasing		
Week 14	Language focus Academic disciplines		
Week 15	Academic writing reflection		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Read technical and scientific literature	General-specific/Specific-general texts	Lectures, Text analysis (independent work), Seminars (work independently and in pairs)	Discussion of the selected texts
Listen to lectures and talks and take notes	An approach to academic writing	Lectures, Seminars (work independently and in pairs)	Objective types of assignments (short answers, multiple-choice quizzes)
Present their own arguments	Various technical and scientific texts Academic and language terms	Lectures, Text analysis (independent work), Seminars (work independently and in pairs)	Oral presentation of arguments using the selected technical and scientific texts
Prepare and orally present technical and scientific topics	Various technical and scientific texts Collocations	Lectures, Discussions, Work on the selected texts	Oral presentation of technical and scientific topics
Plan and write a structured text	Data commentary Constructing a research paper	Lectures, Work on the selected texts	Assessment of students' performance
Summarise and critically evaluate written academic texts	Writing summaries Writing critiques Analysis and evaluation	Lecture, Work on the selected texts (independently and in pairs)	Writing a summary and critical evaluation of the selected academic text
Paraphrase texts	Paraphrasing	Lectures, Discussions, Work on the selected texts	Paraphrasing the given text
Use academic discourse	Language focus Academic disciplines	Discussions, Work on the selected texts (independently and in pairs)	Academic discourse through discussion
Reflect on their own skills, recognise areas for improvements and identify useful resources	Academic writing reflection	Discussions, Work in pairs	Self-evaluation

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Cognitive Linguistics		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	1st		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser and instructor	Prof. Marija Brala Vukanović		
Course instructor	<b>Contact Details</b>		
Prof. Marija Brala Vukanović	Email: <a href="mailto:marija.brala@ffri.uniri.hr">marija.brala@ffri.uniri.hr</a> , Phone: 051/265-629, Office: F-901, Office hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>In this course, you will be familiarised with contemporary theories and analyses in cognitive linguistics. We will have a specific focus on cognitive elements and processes that underlie human linguistic competencies.</p> <p>The course spans explanations of complex operative cognitive principles underlying language, conceptualisation, meaning, discourse, but also human thought. Topics covered include methodological approaches in cognitive linguistics, differences between grammatical and lexical meaning, and metaphor and metonymy as cognitive and linguistic processes.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• analyse basic terminology and theoretical assumptions in cognitive linguistics,</li> <li>• interpret linguistic phenomena (of English but also other languages familiar to the students),</li> <li>• interpret differences between languages regarding terminology and principles of cognitive linguistics,</li> <li>• compare differences between languages with universally operational elements and processes of the human mind and human language competencies,</li> <li>• summarise and evaluate research in cognitive linguistics,</li> <li>• discuss approaches and projects in cognitive linguistics.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	x
II. COURSE EVALUATION AND GRADING CRITERIA			

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	0.67	
Project	0.5	30
Seminar paper	0.5	40
Portfolio	1.33	30
<b>TOTAL</b>	<b>3</b>	<b>100</b>

To obtain a grade on this course, students must i) participate in a project (maximum points: 30), ii) successfully complete the midterm seminar (maximum points: 40), and iii) submit a portfolio (maximum points: 30).

**Project:** The project entails designing, and potentially piloting, a research proposal, which will then be discussed during a special class (Mock 'Project Application viva') and presented to the other students at the end of the course.

**Seminar paper:** The seminar paper will be written in class during the mid-term revision seminar.

**Portfolio:** During the whole duration of the course, each student will work on their personal portfolio, which will consist of completed assignments given at the end of each theoretical module.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Croft, William & D. Alan Cruse. 2004. *Cognitive Linguistics*. (Cambridge Textbooks in Linguistics.) Cambridge: Cambridge University Press.
- Matthews, Peter. 2014. *The Concise Dictionary of Linguistics* (Oxford Paperback Reference). New York: Oxford University Press.

#### RECOMMENDED FURTHER READING

- Evans, Vyvyan, Benjamin Bergen, & Jorg Zinken, editors. 2006. *The Cognitive Linguistics Reader* London: Equinox.
- Evans, Vyvyan and Melanie Green. 2006. *Cognitive Linguistics: An Introduction*. Lawrence Erlbaum Associates.
- Geeraerts, Dirk. 2006. *Cognitive Linguistics: Basic Readings*. Berlin: Mouton de Gruyter.
- Goldberg, Adele. 1994. *Constructions*. Chicago: University of Chicago Press.
- Lee, David. 2002. *Cognitive Linguistics: An Introduction*. New York: Oxford University Press.
- Taylor, John R. 2003. *Cognitive Grammar*. (Oxford Textbooks in Linguistics.) New York: Oxford University Press.
- Ungerer, Friedrich & Hans-Jorg Schmid. 2006. *An Introduction to Cognitive Linguistics*. London: Longman.
- Lakoff, George (1987), 'Cognitive models and prototype theory.' In U. Neisser (Ed.), *Concepts and Conceptual Development: Ecological and Intellectual Factors in Categorization*, 63-100.
- Geeraerts, Dirk (1988), 'Where does prototypicality come from?' In B. Rudzak-Ostyn (Ed.), *Topics in Cognitive Linguistics*, John Benjamins, 207-229.
- Tyler, Andrea and Vyvyan Evans (2001), 'Reconsidering prepositional polysemy network: The case of over', *Language* 77(4), 724-765.
- Grady, Joseph (1999), 'A typology of motivation for conceptual metaphor: Correlation vs. Resemblance'. In R. W. Gibbs & G. Steen (Eds.), *Metaphor in Cognitive Linguistics*, John Benjamins, 79-100.

### IV. ADDITIONAL INFORMATION

<b>ATTENDANCE</b>			
Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.			
<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>			
Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.			
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>			
Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that student contact lecturers in advance to arrange for meeting, whether during office hours or at a different time.			
<b>INFORMATION ABOUT THE FINAL EXAM</b>			
There is no final exam for this course.			
<b>OTHER RELEVANT INFORMATION</b>			
<b>Academic honesty</b>			
Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.			
<b>EXAM DATES</b>			
Winter	29 January 2024 13 February 2024		
Spring supplementary	17 April 2024		
Summer	NA		
Autumn supplementary	12 September 2024 13 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 7	Module 1: The Story of 3 Ws – Introducing Cognitive Linguistics		
Week 8	Module 1: The Story of 3 Ws – Introducing Cognitive Linguistics,		
Week 9	Module 2: Building the Foundations of the Discipline Topics: conceptualisation, mental spaces, figure and ground relation, embodiment		
Week 10	Module 2: Building the Foundations of the Discipline Topics: key tenants of CL, from pointing to words (language-mind relation)		
Week 11	Mid-term Revision Seminar Paper and Practical Workshop		
Week 12	Module 3: Linguistic Relativity		
Week 13	Project Selection and Mock ‘Project Application viva’		
Week 14	Module 4: Applying Cognitive Linguistics		
Week 15	Student research presentations (4h)		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Analyse basic terminology and theoretical assumptions in cognitive linguistics	Modules 1 and 2	Lectures, Portfolio task, Seminar	Portfolio, Seminar
Interpret linguistic phenomena (of English)	Modules 1 and 2	Lectures, Portfolio task, Seminar	Portfolio, Seminar

but also other languages familiar to the students)			
Interpret differences between languages regarding terminology and principles of cognitive linguistics	Module 1-3	Lectures, Portfolio task	Portfolio, Seminar
Compare differences between languages with universally operational elements and processes of the human mind and human language competencies	Module 3	Portfolio task, Project	Project
Summarise and evaluate research in cognitive linguistics	Module 4	Project, Mock conference	Project
Discuss approaches and projects in cognitive linguistics	Modules 1-4	Project, Mock conference	Project

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Introduction to Philosophy of Psychology and Neuroscience		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	1st		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser	Dr. Marko Jurjako		
Course instructor	<b>Contact details</b>		
Dr. Marko Jurjako	Email: <a href="mailto:mjurjako@ffri.uniri.hr">mjurjako@ffri.uniri.hr</a> , Phone: 051/669-210, Office: F-415, Office hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>In this course, we will investigate the dynamic relationship between common-sense psychology, psychology, and neuroscience, and explores how these disciplines intersect in the study of the human mind. Through an examination of the interface problem, we will explore various philosophical, psychological, and neuroscientific approaches and their integration in understanding the complexities of the human mind. We will also analyse the epistemological, ontological, and practical implications that arise from contemplating the nature of the mind.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• explain the discrepancies between folk psychology and scientific concepts from psychology and neuroscience,</li> <li>• explain and evaluate the role of philosophy of psychology in integrating philosophical, psychological and neuroscientific approaches to the research of the human mind (the interface problem),</li> <li>• discuss the interface problem,</li> <li>• apply the interface problem to a case study.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		
Fieldwork	Laboratory work	Mentoring	Other
		x	x
II. COURSE EVALUATION AND GRADING CRITERIA			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	
Class attendance	0.67		

Continuous assessment 1	0.5	30
Continuous assessment 2	1.83	70
<b>TOTAL</b>	3	<b>100</b>

To obtain a grade on this course, students must complete the continuous assessment tasks (Continuous assessment 1 – active participation and essay-style assessment, maximum points: 30; Continuous 2 – active participation and essay-style assessment, maximum points: 70).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Bermudez, J.L. (2005). *Philosophy of psychology: a contemporary introduction*. New York and London: Routledge. (selected chapters)
- Bermúdez, J. (2016). *Cognitive science: An introduction to the science of the mind* (2nd ed.). Cambridge University Press. (selected chapters)
- Weiskopf, D. and Adams, F. (2015). *An introduction to the philosophy of psychology*. Cambridge: Cambridge University Press. (selected chapters)

#### RECOMMENDED FURTHER READING

- Bechtel, W. (2008). *Mental mechanisms: philosophical perspective on cognitive neuroscience*. London and New York: Routledge.
- Bechtel, W. and Graham, G. eds. (1998). *A companion to cognitive science*. Cambridge: Blackwell.
- Bechtel, W., Mandik, P., Mundale, J. and Stufflebeam, R. S. (eds.) (2001). *Philosophy and the neurosciences: a reader*. Cambridge: Basil Blackwell.
- Bermudez, J. L. ed. (2006). *Philosophy of psychology: contemporary readings*. New York and London: Routledge. [Selected papers]
- Bermudez, J. L. (2016). *Cognitive science: an introduction to the science of the mind*. 2. ed., Cambridge: Cambridge University Press.
- Bickle, J., ed. (2009). *The Oxford handbook of philosophy and neuroscience*. Oxford: Oxford University Press.
- Borsboom, D. (2005). *Measuring the mind: conceptual issues in contemporary psychometrics*. Cambridge: Cambridge University Press.
- Botteril, G. and Carruthers, P. (1999). *The philosophy of psychology*. Cambridge: Cambridge University Press.
- Churchland, P. 1981. Eliminative materialism and propositional attitudes. *Journal of Philosophy* 78, 67-90.
- Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavioral and Brain Sciences*, 36, pp. 181-204.
- Calzavarini, F., & Viola, M. (Eds.). (2021). *Neural mechanisms: New challenges in the philosophy of neuroscience*. Springer.
- Colombo, M. (2013). Constitutive relevance and the personal/subpersonal distinction. *Philosophical Psychology* 26, pp. 547–570
- Colombo, M. (2017). Social motivation in computational neuroscience: or if brains are prediction machines, then the Humean theory of motivation is false. In J. Kiverstein (ed.) *Routledge handbook of philosophy of the social mind*.
- Drayson, Z. (2012). The uses and abuses of the personal/subpersonal distinction. *Philosophical Perspectives*, 26(1), 1–18. <https://doi.org/10.1111/phpe.12014>



- Drayson, Z. (2014). The personal/subpersonal distinction. *Philosophy Compass*, 9(5), 338–346. <https://doi.org/10.1111/phc3.12124>
- Favela, L. H., & Machery, E. (2023). Investigating the concept of representation in the neural and psychological sciences. *Frontiers in Psychology*, 14, 1165622. <https://doi.org/10.3389/fpsyg.2023.1165622>
- Garson, J. (2015). *The biological mind: a philosophical introduction*. New York and London: Routledge.
- Hirstein, W., Sifferd, K., & Fagan, T. (2018). *Responsible brains: Neuroscience, law, and human culpability*. The MIT Press.
- Hohwy, J. (2013). *The predictive mind*. Oxford: Oxford University Press.
- O’Donohue, W. and Kitchener, W. eds. (1996). *The philosophy of psychology*. London: Sage Publications.
- Miyazono, K., & Bortolotti, L. (2021). *Philosophy of psychology: An introduction*. Polity Press.
- Pardo, M. S., & Patterson, D. M. (2013). *Minds, brains, and law: The conceptual foundations of law and neuroscience*. Oxford University Press.
- Piccinini, G. (2020). *Neurocognitive mechanisms: Explaining biological cognition*. Oxford University Press.
- Piccinini, G. (2022). Situated neural representations: Solving the problems of content. *Frontiers in Neurobotics*, 16, 846979. <https://doi.org/10.3389/fnbot.2022.846979>
- Piccinini, G. (2022). Neurocognitive mechanisms a situated, multilevel, mechanistic, neurocomputational, representational framework for biological cognition. *Journal of Consciousness Studies*, 29(7), 167–174. <https://doi.org/10.53765/20512201.29.7.167>
- Piccinini, G., & Craver, C. (2011). Integrating psychology and neuroscience: Functional analyses as mechanism sketches. *Synthese*, 183(3), 283–311. <https://doi.org/10.1007/s11229-011-9898-4>
- Sifferd, K. (2018). Non-eliminative reductionism: not the theory of mind some responsibility theorists want, but the one they need. In Bebhinn Donnelly Lazarov (ed.), *Neurolaw and responsibility for action: concepts, crimes, and courts*. Cambridge: Cambridge University Press, pp. 71-103.
- Symons, J. and Calvo, P. eds. (2009). *The Routledge companion to the philosophy of psychology*. New York and London: Routledge.
- Viola, M. (2021). Beyond the Platonic Brain: Facing the challenge of individual differences in function-structure mapping. *Synthese*, 199(1–2), 2129–2155. <https://doi.org/10.1007/s11229-020-02875-x>
- Westfall, M. (2022). Constructing persons: On the personal–subpersonal distinction. *Philosophical Psychology*, 1–30. <https://doi.org/10.1080/09515089.2022.2096431>

#### IV. ADDITIONAL INFORMATION

##### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

##### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

##### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact the lecturer in advance to arrange a meeting.

##### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

##### OTHER RELEVANT INFORMATION

###### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

##### EXAM DATES

Winter	1 February 2024 15 February 2024
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Spring supplementary	16 April 2024		
Summer	N/A		
Autumn supplementary	3 September 2024 10 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 7	Introduction – Personal and subpersonal explanations, and the interface problem in philosophy of cognitive sciences Four pictures of the mind – autonomism, functionalism, representationalism, and neurocomputationalism		
Week 8	Levels of explanation – revisiting David Marr’s tripartite analysis		
Week 9	Modular and non-modular cognitive systems		
Week 10	Explanatory unification in cognitive science: Bayesian brain, predictive processing, and the free energy principle		
Week 11	Representation, mechanisms, and integration in cognitive (neuro)science		
Week 12	Cognitive ontology and neuroscience		
Week 13	4E cognition		
Week 14	Situated cognition and representation		
Week 15	Wrapping up – levels of explanation, the mind, and the world		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Explain the discrepancies between folk psychology and scientific concepts from psychology and neuroscience	Personal and subpersonal explanations, and the interface problem in philosophy of cognitive sciences; Explanatory unification in cognitive science: Bayesian brain, predictive processing, and the free energy principle	Lecture	Continuous assessment 1
Explain and evaluate the role of philosophy of psychology in integrating philosophical, psychological and neuroscientific approaches to the research of the human mind (the interface problem)	Four pictures of the mind – autonomism, functionalism, representationalism, and neurocomputationalism	Discussion, Work on text	Continuous assessments 1 and 2
Discuss the interface problem	Four pictures of the mind – autonomism, functionalism, representationalism, and	Lecture, Discussion, Work on text	Continuous assessment 2

	neurocomputationalism; Levels of explanation – revisiting David Marr’s tripartite analysis		
Apply the interface problem to a case study	Representation, mechanisms, and integration in cognitive (neuro)science; Cognitive ontology and neuroscience; 4E cognition; Situated cognition and representation	Discussion, Work on text	Continuous assessment 2

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Social Cognition: What Do We Know about Others' Minds?		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	1st		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser	Dr. Ljerka Ostojić		
Course instructors	<b>Contact Details</b>		
Dr. Edward Legg	Email: <a href="mailto:edward.legg@uniri.hr">edward.legg@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA		
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>In this course, we will work through the foundations of research on social cognition and discuss current topics in the study of social cognition.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• describe and analyse current topics and recent studies in social cognition research,</li> <li>• critically evaluate methods and claims of social cognition studies.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	
II. COURSE EVALUATION AND GRADING CRITERIA			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	
Class attendance	0.67		
Project-based assessment	2.33	100	

<b>TOTAL</b>	<b>3</b>	<b>100</b>
<p>To obtain a grade on this course, students must participate in a group project (maximum points available: 100).</p> <p>Detailed information about all graded elements will be given and discusses in the first lecture.</p> <p>Final grades will be determined as follows:</p>		
<b>GRADE</b>	<b>UNDEGRADUATE AND GRADUATE PROGRAMMES</b>	
5 (A)	90 – 100 % points	
4 (B)	75 – 89.9 % points	
3 (C)	60 – 74.9 % points	
2 (D)	50 – 59.9 % points	
1 (F)	0 – 49.9 % points	
<b>III. READING</b>		
<b>MANDATORY READING</b>		
<ul style="list-style-type: none"> <li>Frith, C.D. (2008). Social Cognition. <i>Philosophical Transactions of the Royal Society B</i>, 363(1499): 2033–2039. <a href="https://doi.org/10.1098/rstb.2008.0005">https://doi.org/10.1098/rstb.2008.0005</a></li> </ul>		
<b>RECOMMENDED FURTHER READING</b>		
<ul style="list-style-type: none"> <li>Sebanz N., Bekkering H., &amp; Knoblich, G. (2006). Joint action: bodies and minds moving together. <i>Trends in Cognitive Sciences</i>, 10(2): 70-76. <a href="https://doi.org/10.1016/j.tics.2005.12.009">https://doi.org/10.1016/j.tics.2005.12.009</a></li> <li>Dolk, T., Hommel, B., Colzato, L.S., Schütz-Bosbach, S., Prinz, W., &amp; Liepelt, R. (2011). How "social" is the social Simon effect? <i>Frontiers in Psychology</i>, 2:84. <a href="https://doi.org/10.3389/fpsyg.2011.00084">https://doi.org/10.3389/fpsyg.2011.00084</a></li> <li>Hamlin, J.K. &amp; Wynn, K. (2011). Young infants prefer prosocial to antisocial others. <i>Cognitive Development</i>, 26(1):30-39. <a href="https://doi.org/10.1016/j.cogdev.2010.09.001">https://doi.org/10.1016/j.cogdev.2010.09.001</a></li> <li>Hudson, M., Nicholson, T., Simpson, W.A., Ellis, R., &amp; Bach, P. (2016). One step ahead: The perceived kinematics of others' actions are biased toward expected goals. <i>Journal of Experimental Psychology: General</i>, 145(1):1-7. <a href="https://doi.org/10.1037/xge0000126">https://doi.org/10.1037/xge0000126</a></li> <li>Reid, V.M., Dunn, K., Young, R.J., Amu, J., Donovan, T., &amp; Reissland, N. (2018). The Human Fetus Preferentially Engages with Face-like Visual Stimuli. <i>Current Biology</i>, 28(5):824. <a href="https://doi.org/10.1016/j.cub.2018.02.025">https://doi.org/10.1016/j.cub.2018.02.025</a></li> <li>Sebanz, N., Knoblich, G., &amp; Prinz, W. (2003). Representing others' actions: just like one's own? <i>Cognition</i>, 88(3):B11-21. <a href="https://doi.org/10.1016/S0010-0277(03)00043-X">https://doi.org/10.1016/S0010-0277(03)00043-X</a></li> <li>Vestner, T., Gray, K.L.H., &amp; Cook, R. (2020). Why are social interactions found quickly in visual search tasks?, <i>Cognition</i>, 200: 104270. <a href="https://doi.org/10.1016/j.cognition.2020.104270">https://doi.org/10.1016/j.cognition.2020.104270</a></li> <li>Hoehl, S., Keupp, S., Schleihauf, H., McGuigan, N., Buttelmann, D., &amp; Whiten, A. (2019). 'Over-imitation': A review and appraisal of a decade of research. <i>Developmental Review</i>, 51, 90-108.</li> <li>Singer, T., &amp; Lamm, C. (2009). The social neuroscience of empathy. <i>Annals of the New York Academy of Sciences</i>, 1156(1), 81-96.</li> </ul>		
<b>IV. ADDITIONAL INFORMATION</b>		
<b>ATTENDANCE</b>		
Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.		
<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>		
Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.		
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>		
Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact the lecturers in advance to arrange a meeting.		

INFORMATION ABOUT THE FINAL EXAM			
There is no final exam for this course.			
OTHER RELEVANT INFORMATION			
<b>Academic honesty</b> Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.			
EXAM DATES			
Winter	N/A		
Spring supplementary	N/A		
Summer	12 June 2024 26 June 2024		
Autumn supplementary	4 September 2024 11 September 2024		
V. COURSE OUTLINE			
DATE	TOPIC		
Week 7	Introduction to the course. Introduction to Social Cognition		
Week 8	Recognition and Hierarchies. Invited Lecture.		
Week 9	Attention		
Week 10	Joint Action and Intentionality		
Week 11	Project Introduction		
Week 12	Empathy		
Week 13	Cooperation		
Week 14	Social Learning		
Week 15	Round Table Debate, Wrap-up		
VI. CONSTRUCTIVE ALIGNMENT			
LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Describe and analyse current topics and recent studies in social cognition research	Recognition and Hierarchies, Attention, Joint Action, Empathy, Cooperation, Social Learning	Lectures, Seminars, Discussion, Round Table	Project-based assessment
Critically evaluate methods and claims of social cognition studies	Recognition and Hierarchies, Attention, Joint Action, Empathy, Cooperation, Social Learning	Lectures, Seminars, Discussions, Round Table	Project-based assessment

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Introduction to Individual Differences		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	1st		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser	Dr. Asmir Gračanin		
Course instructor	Contact Details		
Dr. Asmir Gračanin	Email: <a href="mailto:agracanin@ffri.uniri.hr">agracanin@ffri.uniri.hr</a> , Phone: 051/265-368, Office: F-361, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
COURSE OVERVIEW			
<p>In this course, you will acquire knowledge on the fundamental concepts of personality psychology, which will enable you to critically assess the scientific and popular-scientific literature on the psychology of individual differences. Thus, we will deal broadly with the following two questions: 1. What is personality? 2. How and why do all people differ from each other?</p>			
EXPECTED LEARNING OUTCOMES			
<ul style="list-style-type: none"> <li>● describe and critically evaluate components of personality psychology, such as: personality traits, personality types, personality processes, interaction between hereditary and environmental factors, interaction between personality and situations,</li> <li>● explain the historical context and causes of fundamental personality theory development,</li> <li>● evaluate the basics of biological, psychodynamic, neo-analytic and cognitive approaches to personality,</li> <li>● evaluate dimensional and factor-analytic approaches to personality,</li> <li>● assess the compatibility of different personality theories,</li> <li>● use the insights from psychodynamic, cognitive, biological and dimensional theories when analysing various topics in the field of humanities and social sciences, but also in understanding everyday life and professional situations,</li> <li>● critically analyse and discuss scientific and popular-scientific literature on individual differences.</li> </ul>			
WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other

	x	x	x
<b>II. COURSE EVALUATION AND GRADING CRITERIA</b>			
<b>ASSESSMENT COMPONENT</b>	<b>ECTS CREDIT ALLOCATION</b>	<b>MAXIMUM POINTS (% OF TOTAL)</b>	
Class attendance	0.67		
Class participation	1	50	
Seminar Paper	1.33	50	
<b>TOTAL</b>	<b>3</b>	<b>100</b>	
<p>To obtain a grade for this course, students must i) actively engage in class (maximum points: 50) and ii) write and present a seminar paper (maximum points: 50).</p> <p>Detailed information about all graded elements will be given and discussed in the first lecture.</p> <p>Final grades will be determined as follows:</p>			
<b>GRADE</b>	<b>UNDEGRADUATE AND GRADUATE PROGRAMMES</b>		
5 (A)	90 – 100 % points		
4 (B)	75 – 89.9 % points		
3 (C)	60 – 74.9 % points		
2 (D)	50 – 59.9 % points		
1 (F)	0 – 49.9 % points		
<b>III. READING</b>			
<b>MANDATORY READING</b>			
<ul style="list-style-type: none"> <li>• Larsen, R.J., &amp; Buss, D.M. (2017). <i>Personality psychology</i>. New York: McGraw-Hill.</li> </ul>			
<b>RECOMMENDED FURTHER READING</b>			
<ul style="list-style-type: none"> <li>• Pervin, L.A., &amp; John, O.P. (Ur.). (1999). <i>Handbook of personality</i>. New York: Guilford.</li> <li>• Nettle, D. (2007). <i>Personality: What makes you the way you are</i>. New York: Oxford</li> <li>• Austin, M.A., Riniolo, T.C., &amp; Porges, S.W. (2007). Borderline personality disorder and emotion regulation: Insights from the Polyvagal theory. <i>Brain and Cognition</i>, 65, 69–76.</li> <li>• Badcock, J.C., &amp; Dragović, M. (2006). Schizotypal personality in mature adults. <i>Personality and Individual Differences</i>, 40, 77-85.</li> <li>• Batey, M., &amp; Furnham, A. (2008). The relationship between measures of creativity and schizotypy. <i>Personality and Individual Differences</i>, 45, 816-821.</li> <li>• Blanch, A., &amp; Aluja, A. (2009). Work, family and personality: A study of work-family conflict. <i>Personality and Individual Differences</i>, 46, 520-524.</li> <li>• Egan, V., &amp; McCorkindale, C. (2007). Narcissism, vanity, personality and mating effort. <i>Personality and Individual Differences</i>, 43, 2105–2115.</li> <li>• Foster, J.D., W, Campbell, K., &amp; Twenge, J.M. (2003). Individual differences in narcissism: Inflated self – views across the lifespan and around the world. <i>Journal of Research in Personality</i>, 37, 469–486.</li> <li>• Gailliot, M.T., &amp; Baumeister, R.F. (2007) The physiology of willpower: Linking blood glucose to self-control. <i>Personality and Social Psychology Review</i>, 11, 4, 303-327.</li> </ul>			
<b>IV. ADDITIONAL INFORMATION</b>			
<b>ATTENDANCE</b>			
Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.			
<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>			



Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.			
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>			
Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact the lecturer in advance to arrange a meeting.			
<b>INFORMATION ABOUT THE FINAL EXAM</b>			
There is no final exam for this course.			
<b>OTHER RELEVANT INFORMATION</b>			
<b>Academic honesty</b> Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.			
<b>EXAM DATES</b>			
Winter	30 January 2024 13 February 2024		
Spring supplementary	18 April 2024		
Summer	N/A		
Autumn supplementary	2 September 2024 5 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 7	Introductory lecture and course overview; Definitions and brief analysis of main approaches to human and animal personality		
Week 8	History of research in personality; Basic principles of scientific research in personality; Different approaches to scientific exploration in personality		
Week 9	Theories of personality, their role and importance, their basic features and their theoretical and empirical evaluation; Measurement in personality psychology		
Week 10	Psycho-analytic and neo-analytic theories of personality		
Week 11	Constitutional theory of personality and contemporary biological approaches		
Week 12	Individual psychology and (non)importance of birth order		
Week 13	Cognitive theories; Paper presentations		
Week 14	Cognitive theories; Paper presentations		
Week 15	Hierarchical theories of personality and its current criticism; Paper presentations		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Describe and critically evaluate components of personality psychology, such as: personality traits, personality types, personality processes, interaction between hereditary and environmental factors,	Introductory lecture and course overview; Definitions and brief analysis of main approaches to human and animal personality; Measurement in personality psychology; Specific elements of all	Lectures, Discussion, Writing and orally presenting seminars, Individual learning, Collaborative learning	Class participation, Seminar paper

interaction between personality and situations	the remaining content		
Explain the historical context and causes of fundamental personality theory development	History of research in personality; Basic principles of scientific research in personality; Different approaches to scientific exploration in personality; Theories of personality, their role and importance, their basic features and their theoretical and empirical evaluation;	Lectures, Discussion, Writing and orally presenting seminars, Individual learning, Collaborative learning	Class participation, Seminar paper
Evaluate the basics of biological, psychodynamic, neo-analytic and cognitive approaches to personality	Constitutional theory of personality and contemporary biological approaches; Cognitive theories; Psycho-analytic and neo-analytic theories of personality; Individual psychology and (non)importance of birth order	Lectures, Discussion, Writing and orally presenting seminars, Individual learning, Collaborative learning	Class participation, Seminar paper
Evaluate dimensional and factor-analytic approaches to personality	Hierarchical theories of personality and its current criticism;	Lectures, Discussion, Writing and orally presenting seminars, Individual learning, Collaborative learning	Class participation, Seminar paper
Assess the compatibility of different personality theories	Different approaches to scientific exploration in personality; Theories of personality, their role and importance, their basic features and their theoretical and empirical evaluation; Specific elements of all the remaining content	Lectures, Discussion, Writing and orally presenting seminars, Individual learning, Collaborative learning	Class participation, Seminar paper
Use the insights from psychodynamic, cognitive, biological and dimensional theories when analysing various topics in the field of humanities and social sciences, but also in understanding everyday life and professional situations	Different approaches to scientific exploration in personality; Theories of personality, their role and importance, their basic features and their theoretical and empirical evaluation; Psycho-analytic and neo-analytic theories of personality; Individual psychology and (non)importance of birth order; Specific elements of all the remaining content	Lectures, Discussion, Writing and orally presenting seminars, Individual learning, Collaborative learning	Class participation, Seminar paper
Critically analyse and	Different approaches to	Lectures, Discussion, Writing and	Class participation,

<p>discuss scientific and popular-scientific literature on individual differences</p>	<p>scientific exploration in personality; Theories of personality, their role and importance, their basic features and their theoretical and empirical evaluation; Psycho-analytic and neo-analytic theories of personality; Individual psychology and (non)importance of birth order; Specific elements of all the remaining content</p>	<p>orally presenting seminars, Individual learning, Collaborative learning</p>	<p>Seminar paper</p>
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## SYLLABUS

KEY INFORMATION ABOUT THE COURSE	
Course title	Interdisciplinary Modules in Cognitive Sciences 2
Study programme	Masters in Cognitive Sciences: Cognition and the Mind
Semester	2nd
Academic year	2023/2024
ECTS credits	9
Contact hours (Lectures + Seminars + Practical work)	60+20+0
Time and venue of classes	TBC
Language of instruction	English
Course organisers	Prof. Igor Bajšanski, Dr. Asmir Gračanin, Dr. Marko Jurjako, Prof. Luca Malatesti
Course instructors	<b>Contact details</b>
Prof. Igor Bajšanski	Email: <a href="mailto:sibajsan@ffri.uniri.hr">sibajsan@ffri.uniri.hr</a> , Phone: 051/265-762, Office: F-347 , Office Hours: TBA
Dr. Asmir Gračanin	Email: <a href="mailto:agracanin@ffri.uniri.hr">agracanin@ffri.uniri.hr</a> , Phone: 051/265-368, Office: F-361, Office Hours: TBA
Dr. Ivan Flis	Email: <a href="mailto:ivan.flis@ffri.uniri.hr">ivan.flis@ffri.uniri.hr</a> , Office: F-121, Office Hours: TBA
Dr. Marko Jurjako	Email: <a href="mailto:mjurjako@ffri.uniri.hr">mjurjako@ffri.uniri.hr</a> , Phone: 051/669-210, Office: F-415, Office Hours: TBA
Dr. Edward Legg	Email: <a href="mailto:edward.legg@uniri.hr">edward.legg@uniri.hr</a> , Phone: 051/669-217, Office: 344, Office Hours: TBA
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: 344, Office Hours: TBA
Prof. Pavle Valerjev	Email: <a href="mailto:valerjev@unizd.hr">valerjev@unizd.hr</a> (external collaborator)
Dr. Valnea Žauhar	Email: <a href="mailto:vzauhar@ffri.uniri.hr">vzauhar@ffri.uniri.hr</a> Phone: 051/265-780, Office: 336, Office Hours: TBA
I. DETAILED COURSE DESCRIPTION	
COURSE OVERVIEW	
<p>In this follow-up course to the <i>Interdisciplinary Modules in Cognitive Sciences 1</i>, you will gain further knowledge of selected topics from cognitive sciences from a disciplinary and interdisciplinary perspective. In addition to interactive lectures, we will have interdisciplinary moderated discussion groups. For some of these, your lecturers will select the literature, for others you will be able to select topics and papers of your interest. In addition, we will have invited lecturers for specific topics.</p>	
EXPECTED LEARNING OUTCOMES	

- synthesise results and insights from selected areas,
- consider and compare theories and models within selected areas,
- critically evaluate claims of empirical research from selected areas,
- analyse interdisciplinary links between disciplines and areas,
- synthesise arguments from philosophy in selected areas,
- compare discussions in selected areas in philosophy and within empirical disciplines and areas.

**WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')**

Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	

**II. COURSE EVALUATION AND GRADING CRITERIA**

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	2.67	
Class participation	2.33	35
Essay	2	35
Written Exam	2	30
<b>TOTAL</b>	<b>9</b>	<b>100</b>

To obtain a grade on this course, students must i) participate in class discussions and other tasks during classes (maximum points available: 35), ii) submit one essay per module for four modules (maximum points available: 35), and iii) write an essay-style exam at the end of the term (maximum points available: 30).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

**III. READING**

**MANDATORY READING**

- Frodeman, R., Klein, J.T., & Pacheco, R.C.D.S. (Eds). (2017). *The Oxford handbook of interdisciplinarity*. Oxford University Press.
- Dennett, D.C. (1981). True believers: the intentional strategy and why it works. In Chalmers (2002). *Philosophy of Mind: classical and contemporary readings*. Oxford University Press.
- Gentner, D. (2010). Psychology in cognitive science: 1987-2038. *Topics in Cognitive Science*, 2(3), 328-344.
- Van Eck, N.J. & Waltman, L. (2014). CitNetExplorer: A new software tool for analyzing and visualizing citation networks. *Journal of Informetrics*, 8(4), 802-823. <https://doi.org/10.1016/j.joi.2014.07.006>
- Dehaene, S. (2009). Origins of mathematical intuitions: the case of arithmetic. *Annals of the New York Academy of Sciences*, 1156, 232-259. <https://doi.org/10.1111/j.1749-6632.2009.04469.x>
- Nieder, A., & Dehaene, S. (2009). Representation of number in the brain. *Annual Review of Neuroscience*, 32, 185-208. <https://doi.org/10.1146/annurev.neuro.051508.135550>
- Cavanagh, P. (2011). Visual cognition. *Vision Research*, 51(13), 1538-1551. <https://doi.org/10.1016/j.visres.2011.01.05>
- Franconeri, S.L., Alvarez, G.A., & Cavanagh, P. (2013). Flexible cognitive resources: competitive content maps for attention and memory. *Trends in Cognitive Sciences*, 17(3), 134-141.

<https://doi.org/10.1016/j.tics.2013.01.010>

- Roelfsema, P.R., & Houtkamp, R. (2011). Incremental grouping of image elements in vision. *Attention, Perception & Psychophysics*, 73(8), 2542-2572. <https://doi.org/10.3758/s13414-011-0200-0>
- Samuels, R., Stich, S., & Bishop, M. (2002). Ending the rationality wars: how to make disputes about human rationality disappear. In R. Eliso (Ed.), *Common Sense, Reasoning, and Rationality*. Oxford University Press.
- Evans, J.St.B.T. & Stanovich, K.E. (2013). Dual-process theories of higher cognition advancing the debate. *Perspectives on Psychological Science*, 8(3), 223-241. <https://doi.org/10.1177/1745691612460685>
- Pennycook, G., Fugelsang, J.A., & Koehler, D.J. (2015). What makes us think? A three-stage dual-process model of analytic engagement. *Cognitive Psychology*, 80, 34-72. <https://doi.org/10.1016/j.cogpsych.2015.05.001>
- Stanovich, K.E. & West, R.F. (2000). Individual differences in reasoning: implications for the rationality debate. *Behavioral & Brain Sciences*, 23, 645-726. <https://doi.org/10.1017/S0140525X0028343X>
- Tversky, A. & Kahneman, D. (1974). Judgement under uncertainty: Heuristics and biases. *Science*, 185, 1124-1131. <https://doi.org/10.1126/science.185.4157.1124>

**RECOMMENDED FURTHER READING**

- Cohen Kadosh, R., & Dowker, A. (2015). *The Oxford handbook of numerical cognition*. New York: Oxford University Press.
- Fischer, M. H. & Shaki, S. (2014). Spatial associations in numerical cognition – from single digits to arithmetic. *Quarterly Journal of Experimental Psychology*, 67(8), 1461-1483. <https://doi.org/10.1080/17470218.2014.927515>
- De Neys, W. & Glumicic, T. (2008). Conflict monitoring in dual process theories of reasoning. *Cognition*, 106, 1248-1299. <https://doi.org/10.1016/j.cognition.2007.06.002>
- Dehaene, S. (2011). *The number sense. 2nd ed.* New York: Oxford University Press.
- Coltheart, V. (2010). *Tutorials in visual cognition*. New York: Psychology Press. Ross, B.H., & Irwin, D. (2013). *Cognitive vision*. Amsterdam: Elsevier Science.

**IV. ADDITIONAL INFORMATION**

**ATTENDANCE**

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

**WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE**

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

**WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS**

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange a meeting.

**INFORMATION ABOUT THE FINAL EXAM**

The final exam is an essay-style exam in which students will choose two questions.

**OTHER RELEVANT INFORMATION**

**Academic honesty**

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

**EXAM DATES**

Winter	N/A
Spring supplementary	N/A

Summer	14 June 2024 28 June 2024		
Autumn supplementary	6 September 2024 13 September		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 1	Module 1: Metacognition and Metareasoning Instructors: Igor Bajšanski, Pavle Valerjev, Valnea Žauhar		
Week 2	Module 1: Metacognition and Metareasoning Instructors: Igor Bajšanski, Pavle Valerjev, Valnea Žauhar		
Week 3	Module 1: Metacognition and Metareasoning Instructors: Igor Bajšanski, Pavle Valerjev, Valnea Žauhar		
Week 4	Module 2: Metacognition and Consciousness Instructor: Ljerka Ostojić, Markjo Jurjako		
Week 5	Module 2: Metacognition and Consciousness Instructors: Ljerka Ostojić, Marko Jurjako		
Week 6	Module 2: Metacognition and Consciousness Instructor: Ljerka Ostojić, Marko Jurjako		
Week 7	Module 3: Theory of Mind Instructors: Edward Legg, Ljerka Ostojić		
Week 8	Module 3: Theory of Mind Instructors: Edward Legg, Ljerka Ostojić		
Week 9	Module 3: Theory of Mind Instructors: Edward Legg, Ljerka Ostojić		
Week 10	Module 4: Perception and Social Cognition Instructor: Edward Legg		
Week 11	Module 4: Perception and Social Cognition Instructor: Edward Legg		
Week 12	Module 5: Individual Differences in Cognition Instructor: Asmir Gračanin		
Week 13	Module 5: Individual Differences in Cognition Instructor: Asmir Gračanin		
Week 14	Workshop: Interdisciplinarity vs. Multidisciplinarity in Cognitive Sciences Instructor: Ivan Flis		
Week 15	Workshop: Interdisciplinarity vs. Multidisciplinarity in Cognitive Sciences Instructor: Ivan Flis		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Synthesise results and insights from selected areas	Metacognition, Consciousness, Theory of Mind, Social Cognition, Perception, Individual Differences	Lectures, Seminars	Class Participation (discussion), Essays, Written exam
Consider and compare theories and models within selected areas	Metacognition, Consciousness, Theory of Mind, Social Cognition, Perception	Lectures, Seminars	Class Participation (discussion), Essays, Written exam
Critically evaluate claims of empirical research from selected areas	Metacognition, Consciousness, Theory of Mind, Social Cognition, Perception, Individual	Lectures, Seminars	Class Participation (discussion), Wssays, Written exam

	Differences		
Analyse interdisciplinary links between disciplines and areas	Interdisciplinarity, Multidisciplinarity	Workshop	Class Participation (discussion), Wssays, Written exam
Synthesise arguments from philosophy in selected areas	Metacognition, Consciousness, Theory of Mind	Lectures, Seminars	Class Participation (discussion), Essays, Written exam
Compare discussions in selected areas in philosophy and within empirical disciplines and areas	Metacognition, Consciousness, Theory of Mind	Lectures, Seminars, Workshop	Class Participation (discussion), Essays, Written exam



## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Ethics		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	2nd		
Academic year	2023/2024		
ECTS credits	6		
Contact hours (Lectures + Seminars + Practical work)	15+30+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser	Dr. Ljerka Ostojić		
Course instructors	Contact details		
Dr. Ivan Flis	Email: <a href="mailto:ivan.flis@ffri.uniri.hr">ivan.flis@ffri.uniri.hr</a> , Office: F-121, Office Hours: TBA		
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>In this course, will work through ethical questions in cognitive sciences research and discuss situations and components that you are likely to encounter in your future research career.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• critically assess the role of ethics for cognitive sciences,</li> <li>• analyse ethical issues related to different studies,</li> <li>• assess the ways in which ethical issues in empirical research can be approached during applications for ethical approval,</li> <li>• discuss ethical issues arising from the use of empirical data and results,</li> <li>• analyse ethical questions related to the nature of work and professional development in academia.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	
II. COURSE EVALUATION AND GRADING CRITERIA			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	

Class attendance	1.5	
Project	2.5	50
Seminar paper	2	50
<b>TOTAL</b>	6	<b>100</b>

To obtain a grade on this course, students must i) take part in a project (maximum points: 50) and ii) submit one seminar paper (maximum points: 50).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Rosnow, R.L. & Rosenthal (2013). *Beginning Behavioral Research: A Conceptual Primer*. Harlow: Prentice Hall.
- Levelt, W.J., Drenth, P.J.D., & Noort, E. (2012). Flawed science: The fraudulent research practices of social psychologist Diederik Stapel. Retrieved from [https://pure.mpg.de/rest/items/item\\_1569964/component/file\\_1569966/content](https://pure.mpg.de/rest/items/item_1569964/component/file_1569966/content)
- Birhane, A. & Guest, O. (2020). Towards decolonising computational sciences. *arXiv:1009.14258*.
- Lee, D.N. (2020). Diversity and inclusion activism in animal behaviour and the ABS: a historical view from the USA. *Animal Behaviour*, 164, 273-280. <https://doi.org/10.1016/j.anbehav.2020.03.019>
- Greene, T., Schmueli, G., Ray, S., & Fell, J. (2019). Adjusting to the GDPR: The impact on data scientists and behavioral researchers. *Big data*, 7(3), 140-162. <https://doi.org/10.1089/big.2018.0176>
- Buchanan, K., Burt de Perera, T., Carere, C., Carter, T., Hailey, A., Hubrecht, R., Jennings, D., Metcalfe, N., Pitcher, T., Peron, F., Sneddon, L., Sherwin, C., Talling, J., Thomas, R., & Thompson, M. (2012). Guidelines for the treatment of animals on behavioural research and teaching. *Animal Behaviour*, 83(1), 301-309. <https://doi.org/10.1016/j.anbehav.2011.10.031>
- Norton, B.J. (1978). Karl Pearson and Statistics: The origins of scientific innovation. *Social Studies of Science*, 8(1), 3-34.
- Smaldino, P.E. & McElreath, R. (2016). The natural selection of bad science. *Royal Society Open Science*, 3(9), 160384. <https://doi.org/10.1098/rsos.160384>
- Vanderkerckhove, J., White, C.N., Trueblood, J.S., Rouder, J.N., Matzke, D., Leite, F.P., Etz, A., Donkin, C., Devezer, B., Criss, A.H., & Lee, M.D. (2019). Robust diversity in cognitive science. *Computational Brain & Behavior*, 2, 271-276. <https://doi.org/10.1007/s42113-019-00066-7>.
- Chambers, C.D., Dienes, Z., McIntosh, R.D., Rotshtein, P., & Willmes, K. (2015). Registered reports: realigning incentives in scientific publishing. *Cortex*, 66, A1-A2. <https://doi.org/10.1016/j.cortex.2015.03.022>
- Tennant, J.P., Waldner, F., Jacques, D.C., Masuzzo, P., Collister, L.B., & Hartgerink, C.H. (2016). The academic, economic and societal impacts of Open Access: an evidence-based review. *F1000Research*, 5, 632. <https://doi.org/10.12688/f1000research.8460.3>
- Eren, E. (2020). Never the right time: maternity planning alongside a science career in academia. *Journal of Gender Studies*, 1-12. <https://doi.org/10.1080/09589236.2020.1858765>

#### RECOMMENDED FURTHER READING

- Siebert, J.E. (2004). Empirical research on research ethics. *Ethics & Behavior*, 14(4), 397-412. [https://doi.org/10.1207/s15327019eb1404\\_9](https://doi.org/10.1207/s15327019eb1404_9)
- Mietola, R., Miettinen, S., & Vehmas, S. (2017). Voiceless subjects? Research ethics and persons with profound intellectual disabilities. *International Journal of Social Research Methodology*, 20(3), 263-274.
- Jaffe, K., Correa, J.C., & Tang-Martinez, Z. (2020). Ethology and animal behaviour in Latin America. *Animal Behaviour*, 164, 281-291. <https://doi.org/j.anbehav.2019.11.007>
- Gluck, J.P. (1997). Harry F. Harlow and animal research: reflections on the ethical paradox. *Ethics & Behavior*, 7(2), 149- 161.
- Delzell, D.A.P. & Poliak, C.D. (2013). Karl Pearson and Eugenics: Personal Opinions and Scientific Rigor. *Science and Engineering Ethics*, 19, 1057-1070.
- Smaldino, P.E., Turner, M.A., & Contreras Kallens, P.A. (2019). Open science and modified funding lotteries can impede the natural selection of bad science. *Royal Society Open Science*, 6(7), 190194. <https://doi.org/10.1098/rsos.190194>
- Nosek, B.A., Spies, J.R., & Motyl, M. (2012). Scientific Utopia II. Restructuring incentives and practices to promote truth over publishability. *Perspectives on Psychological Science*, 7(6), 615-631. <https://doi.org/10.1177/1745691612459058>
- Weisshaar, K. (2017). Publish *and* perish? An assessment of gender gaps in promotion to tenure in academia. *Social Forces*, 96(2), 529-560. <https://doi.org/10.1093/sf/sox052>

#### IV. ADDITIONAL INFORMATION

##### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

##### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

##### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange a meeting.

##### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

##### OTHER RELEVANT INFORMATION

###### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

##### EXAM DATES

Winter	N/A
Spring supplementary	N/A
Summer	12 June 2024 26 June 2024
Autumn supplementary	4 September 2024 11 September 2024

#### V. COURSE OUTLINE

DATE	TOPIC
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Week 1	Introduction to the course. Introduction to Ethics in Cognitive Sciences
Week 2	Module 1: Ethics and Philosophy Instructor: TBC
Week 3	Module 2: Ethics in Research with Participants Instructor: Ljerka Ostojić
Week 4	Module 2: Ethics in Research with Participants Instructor: Ljerka Ostojić
Week 5	Module 2: Ethics in Research with Participants Instructor: Ljerka Ostojić
Week 6	Module 2: Ethics in Research with Participants Instructor: Ljerka Ostojić
Week 7	Project Introduction
Week 8	Module 3: Ethics and Open Science Instructor: Ivan Flis, Ljerka Ostojić
Week 9	Module 3: Ethics and Open Science Instructor: Ivan Flis, Ljerka Ostojić
Week 10	Module 4: Ethics in AI Instructor: Ivan Flis, Ljerka Ostojić
Week 11	Module 4: Ethics in AI Instructor: Ivan Flis, Ljerka Ostojić
Week 12	Module 5: Ethics in Philosophical Work Instructor: TBC
Week 13	Module 6: Ethics and the Scientific Community Instructor: Ivan Flis, Ljerka Ostojić
Week 14	Module 6: Ethics and the Scientific Community Instructor: Ivan Flis, Ljerka Ostojić
Week 15	Wrap-up, Project Presentation and Discussion

## VI. CONSTRUCTIVE ALIGNMENT

LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Critically assess the role of ethics for cognitive sciences	Ethics in philosophy, Ethics in empirical research, Ethics in AI	Lectures, Seminars, Discussions	Project-based assessment, Seminar paper
Analyse ethical issues related to different studies	Ethics in philosophy, Ethics in empirical research, Ethics in AI	Lectures, Seminars, Discussions	Project-based assessment, Seminar paper
Assess the ways in which ethical issues in empirical research can be approached during applications for ethical approval	Ethics in working with human participants, Ethics in working with animal participants	Lectures, Seminars, Discussions	Project-based assessment, Seminar paper
Discuss ethical issues arising from the use of empirical data and results	Ethics in empirical research, Open Science, Data Management, Data Sharing, Dissemination of research, Participatory research	Lectures, Seminars, Discussions	Project-based assessment, Seminar paper
Analyse ethical questions	Ethics and the scientific	Lectures, Seminars, Discussions	Project-based

related to the nature of work and professional development in academia	community, Visibility and diversity in the scientific community, Scientific colonialism		assessment, Seminar paper
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## SYLLABUS

KEY INFORMATION ABOUT THE COURSE	
Course title	Empirical Research Methods 2
Study programme	Masters in Cognitive Sciences: Cognition and the Mind
Semester	2nd
Academic year	2023/2024
ECTS credits	7
Contact hours (Lectures + Seminars + Practical work)	30+30+0
Time and venue of classes	TBC
Language of instruction	English
Course organisers	Prof. Dražen Domijan, Dr. Asmir Gračanin
Course instructors	<b>Contact details</b>
Prof. Dražen Domijan	Email: <a href="mailto:drazen.domijan@ffri.uniri.hr">drazen.domijan@ffri.uniri.hr</a> , Phone: 051/265-758, Office: F-334, Office hours: TBA
Dr. Asmir Gračanin	Email: <a href="mailto:agracanin@ffri.uniri.hr">agracanin@ffri.uniri.hr</a> , Phone: 051/265-768, Office: F-361, Office Hours: TBA
Dr. Edward Legg	Email: <a href="mailto:edward.legg@uniri.hr">edward.legg@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA
Dr. Marko Tončić	Email: <a href="mailto:mtoncic@ffri.uniri.hr">mtoncic@ffri.uniri.hr</a> , Phone: 051/265-769, Office: F-369, Office Hours: TBA
I. DETAILED COURSE DESCRIPTION	
COURSE OVERVIEW	
<p>In this course, you will familiarise yourself with the diversity of methodological approaches and methods in cognitive sciences and will train for (independent) research in cognitive sciences by integrating steps in empirical research through a specialised workshop.</p>	
EXPECTED LEARNING OUTCOMES	
<ul style="list-style-type: none"> <li>• design experimental and non-experimental studies based on different research questions,</li> <li>• select and conceptualise appropriate methods for planning and conducting a study,</li> <li>• analyse and evaluate the implementation of correlational designs in cognitive sciences,</li> <li>• apply and adapt assessment scales in cognitive sciences,</li> <li>• apply psychophysiological measures for research in cognitive sciences,</li> <li>• design cognitive experiments with reaction time as a dependent variable,</li> </ul>	

- analyse and interpret results of an experiment with reaction time as a dependent variable,
- program a cognitive experiment using PsychoPy or OpenSesame,
- design and program online experiments.

**WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')**

Lectures	Seminars	Practical work	Independent work
X	X		X
Fieldwork	Laboratory work	Mentoring	Other
			X

**II. COURSE EVALUATION AND GRADING CRITERIA**

ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)
Class attendance	2	
Class participation	2	20
Seminar paper	2	50
Project	2	30
<b>TOTAL</b>	<b>7</b>	<b>100</b>

To obtain a grade on this course, students must i) participate in class discussions and other tasks during classes (maximum points: 20), ii) actively take part in the class project (workshop; maximum points: 30), and iii) submit a seminar paper (workshop report; maximum points: 50).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

**III. READING**

**MANDATORY READING**

- Bermúdez, J. (2016). *Cognitive science: An introduction to the science of the mind* (2nd ed.). Cambridge University Press.
- Shaughnessy, J. J., Zechmeister, E. B. & Zechmeister, J. S. (2012). *Research methods in psychology* (9th ed.). McGraw-Hill.
- Stewart, N., Chadler, J., & Paolacci, G. (2017). Crowdsourcing samples in cognitive science. *Trends in cognitive sciences*, 21(10), 736-748. <https://doi.org/10.1016/j.tics.2017.06.007>
- Farrell, S. & Lewandowsky, S. (2018). *Computational modeling of cognition and behavior*. Cambridge University Press.
- Kline, R. B. (2008). *Becoming a behavioral science researcher: A Guide to producing research that matters*. The Guilford Press.

**RECOMMENDED FURTHER READING**

- Wagenmakers, E.-J. (2018). *Stevens' handbook of experimental psychology and cognitive neuroscience. Volume 5: Methodology* (4th ed.). John Wiley & Sons.
- Dienes, Z. (2008). *Understanding psychology as a science: An introduction to scientific and statistical inference*. Palgrave Macmillan.
- Sun, R. (2008). *The Cambridge handbook of computational psychology*. Cambridge University Press.

- Chmielewski, M. & Kucker, S.C. (2019). An MTurk crisis? Shifts in data quality and the impact on study results. *Social Psychological and Personality Science*, 11, 464-473. <https://doi.org/10.1177/1948550619875149>
- Owens, J. & Hawkins, E.M. (2019). Using online labor market participants for nonprofessional investor research: a comparison of MTurk and Qualtrics samples. *Journal of Information Systems*, 33(1), 113-128. <https://doi.org/10.2308/isys/52036>

#### IV. ADDITIONAL INFORMATION

##### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

##### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

##### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange a meeting.

##### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

##### OTHER RELEVANT INFORMATION

###### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

##### EXAM DATES

Winter	N/A
Spring supplementary	N/A
Summer	19 June 2024 3 July 2024
Autumn supplementary	4 September 2024 11 September 2024

#### V. COURSE OUTLINE

DATE	TOPIC
Week 1	Non-experimental correlational designs Instructor: Asmir Gračanin
Week 2	Non-experimental correlational designs Instructor: Asmir Gračanin
Week 3	Mental chronometry Instructor: Dražen Domijan
Week 4	Mental chronometry Instructor: Dražen Domijan
Week 5	Programming cognitive experiments Instructor: Edward Legg
Week 6	Programming cognitive experiments Instructor: Edward Legg
Week 7	Programming cognitive experiments Instructor: Edward Legg
Week 8	Online testing in cognitive sciences



	Instructor: Edward Legg
Week 9	Online testing in cognitive sciences Instructor: Edward Legg
Week 10	Online testing in cognitive sciences Instructor: Edward Legg
Week 11	Open Science tools for planning and designing empirical research Instructor: Ljerka Ostojic
Week 12	Preparation for workshop
Week 13	Workshop
Week 14	Workshop
Week 15	Workshop wrap-up

#### VI. CONSTRUCTIVE ALIGNMENT

LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Design experimental and non-experimental studies based on different research questions	Non-experimental correlational designs, Mental chronometry, Programming cognitive experiments, Online testing	Lectures, Seminars, Workshop	Class Participation, Project, Seminar paper
Select and conceptualise appropriate methods for planning and conducting a study	Non-experimental correlational designs, Mental chronometry, Programming cognitive experiments, Online testing, Open Science	Lectures, Seminars, Workshop	Class Participation, Project, Seminar paper
Analyse and evaluate the implementation of correlational designs in cognitive sciences	Non-experimental correlational designs, Open Science	Lectures, Seminars	Class Participation
Apply and adapt assessment scales in cognitive sciences	Non-experimental correlational designs	Lectures, Seminars	Class Participation
Apply psychophysiological measures for research in cognitive sciences	Non-experimental correlational designs,	Lectures, Seminars	Class Participation
Design cognitive experiments with reaction time as a dependent variable	Mental chronometry, Programming cognitive experiments, Online testing	Lectures, Seminars, Workshop	Class Participation, Project, Seminar paper
Analyse and interpret results of an experiment with reaction time as a dependent variable	Mental chronometry	Lectures, Seminars, Workshop	Class Participation, Project, Seminar paper
Program a cognitive experiment using PsychoPy or OpenSesame	Programming cognitive experiments	Lectures, Seminars	Class Participation
Design and program online experiments	Online testing	Lectures, Seminars	Class Participation

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Rotation project 2		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	2nd		
Academic year	2023/2024		
ECTS credits	5		
Contact hours (Lectures + Seminars + Practical work)	3+9+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organisers	Dr. Ljerka Ostojić		
Course instructors	Contact details		
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>Like in the course <i>Rotation project 1</i>, you will choose one of the offered topics and, independently and with your supervisor, plan and design a study. The aim of the course is to think about the importance of early stages of research, thus the emphasis will be on planning and structuring the research: for empirical projects, this will include planning statistical analysis but will not include data collection, and for theoretical projects, this will focus on structuring and planning the project.</p> <p>This semester, you will be asked to especially focus on data management and ethical questions related to your selected research question. Thus, the rotation project will give you the opportunity to apply knowledge and skills from the <i>Empirical Research Methods 2</i> and <i>Ethics</i> courses.</p> <p>In addition, we will organise several workshops with external collaborators and invited lecturers.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• select and adapt research designs according to a research question,</li> <li>• explain and argue the choice of research design according to a research question,</li> <li>• critically assess possible claims based on the planned study,</li> <li>• critically evaluate possible ways to increase reproducibility and replicability of research (if relevant),</li> <li>• plan and write a data management plan for a selected research question,</li> <li>• critically evaluate ethical questions related to a selection research question,</li> <li>• analyse possible ways to approach the above-mentioned ethical questions in practice.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x

Fieldwork	Laboratory work	Mentoring	Other
		x	x
<b>II. COURSE EVALUATION AND GRADING CRITERIA</b>			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	
Class attendance	0.4		
Project	3	50	
Seminar paper	1.6	50	
<b>TOTAL</b>	<b>5</b>	<b>100</b>	
<p>To obtain a grade on this course, students must i) choose and conduct one rotation project (maximum points: 50) and ii) submit a seminar paper (rotation project report; maximum points: 50).</p> <p>Detailed information about all graded elements will be given and discussed in the first lecture.</p> <p>Final grades will be determined as follows:</p>			
GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES		
5 (A)	90 – 100 % points		
4 (B)	75 – 89.9 % points		
3 (C)	60 – 74.9 % points		
2 (D)	50 – 59.9 % points		
1 (F)	0 – 49.9 % points		
<b>III. READING</b>			
<b>MANDATORY READING</b>			
<ul style="list-style-type: none"> <li>• Wilkinson, M., Dumontier, M., Aalbersberg, I. <i>et al.</i> (2016). The FAIR Guiding Principles for scientific data management and stewardship. <i>Scientific Data</i> 3, 160018</li> <li>• Gewin, V. (2016). Data sharing: An open mind on open data. <i>Nature</i>, 529(7584), 117-119.</li> <li>• Stewart, N., Chandler, J., &amp; Paolacci, G. (2017). Crowdsourcing samples in cognitive science. <i>Trends in cognitive sciences</i>, 21(10), 736-748.</li> <li>• Crüwell, S., van Doorn, J., Etz, A., Makel, M. C., Moshontz, H., Niebaum, J. C., ... &amp; Schulte-Mecklenbeck, M. (2019). Seven easy steps to open science. <i>Zeitschrift für Psychologie</i>.</li> </ul>			
<b>RECOMMENDED FURTHER READING</b>			
<ul style="list-style-type: none"> <li>• Truong, N. B., Sun, K., Lee, G. M., &amp; Guo, Y. (2019). Gdpr-compliant personal data management: A blockchain-based solution. <i>IEEE Transactions on Information Forensics and Security</i>, 15, 1746-1761.</li> <li>• McLeod, J., &amp; O'Connor, K. (2020). Ethics, archives and data sharing in qualitative research. <i>Educational Philosophy and Theory</i>, 53(5), 523-535.</li> <li>• Gurevitch, J., Koricheva, J., Nakagawa, S., &amp; Stewart, G. (2018). Meta-analysis and the science of research synthesis. <i>Nature</i>, 555(7695), 175-182.</li> </ul>			
<b>IV. ADDITIONAL INFORMATION</b>			
<b>ATTENDANCE</b>			
Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.			
<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>			
Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.			
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>			

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact the lecturer in advance to arrange a meeting.

#### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

#### OTHER RELEVANT INFORMATION

##### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

#### EXAM DATES

Winter	N/A
Spring supplementary	N/A
Summer	12 June 2024 26 June 2024
Autumn supplementary	4 September 2024 11 September 2024

#### V. COURSE OUTLINE

DATE	TOPIC
Week 1	Introduction to the course (choosing of topics, preparing for the rotation project) (1S)
Week 2	
Week 3	
Week 4	Workshop 1*: How can I make my research reproducible and replicable? (1L+2S)
Week 5	
Week 6	
Week 7	Workshop 2*: Data Management (1L + 3S)
Week 8	
Week 9	
Week 10	Workshop 3*: Meta-Analysis (1L + 2S)
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	Final discussion (1S)

\* Workshops are organised with external collaborators or invited lecturers, thus the dates may change. Workshops will either be held in person or online.

#### VI. CONSTRUCTIVE ALIGNMENT

LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Select and adapt research designs according to a research question	Selected project area, Replicability, Reproducibility, Meta-analysis	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper

Explain and argue the choice of research design according to a research question	Selected project area, Replicability, Reproducibility, Meta-analysis	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper
Critically assess possible claims based on the planned study	Selected project area	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper
Critically evaluate possible ways to increase reproducibility and replicability of research (if relevant),	Selected project area, Replicability, Reproducibility	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper
Plan and write a data management plan for a selected research question,	Selected project area, Data management	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper
Critically evaluate ethical questions related to a selection research question,	Selected project area, Ethics, GDPR, FAIR Data	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper
Analyse possible ways to approach the above-mentioned ethical questions in practice.	Selected project area, Ethics, GDPR, FAIR Data	Individual work, Meetings with project supervisor, Workshops	Project, Seminar paper

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Current Issues in Empirical Cognitive Sciences		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	II.		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organisers	Prof. Predrag Šustar, Dr. Ljerka Ostojić		
Course instructors	<b>Contact Details</b>		
Dr. Zdenka Brzović	Email: <a href="mailto:zdenka@ffri.uniri.hr">zdenka@ffri.uniri.hr</a> , Phone: 051/265-795, Office: F-413, Office hours: TBA		
Dr. Ivan Flis	Email: <a href="mailto:ivan.flis@uniri.hr">ivan.flis@uniri.hr</a> , Office: F-121, Office hours: TBA		
Dr. Ljerka Ostojić	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/699-217, Office: F-344, Office hours: TBA		
Prof. Predrag Šustar,	Email: <a href="mailto:psustar@ffri.uniri.hr">psustar@ffri.uniri.hr</a> Phone: 051/265-601, Office: F-413, Office hours: TBA		
I. DETAILED COURSE DESCRIPTION			
COURSE OVERVIEW			
<p>In this course, we will introduce and discuss different topics and questions of empirical cognitive sciences from the interdisciplinary perspective of philosophy of science, history of science, and the emerging field of meta-science, an interdisciplinary field using scientific methodology to study science and its processes).</p>			
EXPECTED LEARNING OUTCOMES			
<ul style="list-style-type: none"> <li>• describe and analyse current topics in meta-science from different perspectives,</li> <li>• critically evaluate the work of the meta-scientific community.</li> </ul>			
WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')			
Lectures	Seminars	Practical work	Independent work

x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	
<b>II. COURSE EVALUATION AND GRADING CRITERIA</b>			
<b>ASSESSMENT COMPONENT</b>	<b>ECTS CREDIT ALLOCATION</b>	<b>MAXIMUM POINTS (% OF TOTAL)</b>	
Class attendance	1		
Project-based assessment	2	100	
<b>TOTAL</b>	<b>3</b>	<b>100</b>	
To obtain a grade for this course, students must take part and successfully complete all aspects of the project-based assessment (maximum points: 100).			
Detailed information about all graded elements will be given and discussed in the first lecture.			
Final grades will be determined as follows:			
<b>GRADE</b>	<b>UNDEGRADUATE AND GRADUATE PROGRAMMES</b>		
5 (A)	90 – 100 % points		
4 (B)	75 – 89.9 % points		
3 (C)	60 – 74.9 % points		
2 (D)	50 – 59.9 % points		
1 (F)	0 – 49.9 % points		
<b>III. READING</b>			
<b>MANDATORY READING</b>			
<ol style="list-style-type: none"> <li>1 . Smaldino, P. E. &amp; McElreath, R. (2016). The natural selection of bad science. <i>Royal Society Open Science</i>, doi: 10.1098/rsos.160384.</li> <li>2 . Leonelli, S. (2018). Re-thinking reproducibility as a criterion for research quality. [Pre-print]. <a href="http://philsci-archive.pitt.edu/14352/1/Reproducibility_2018_SL.pdf">http://philsci-archive.pitt.edu/14352/1/Reproducibility_2018_SL.pdf</a></li> <li>3 . Flis, I. (2019). Psychologists psychologising scientific psychology: an epistemological reading of the replication crisis. <i>Theory &amp; Psychology</i> 29, 158-181.</li> </ol>			
<b>RECOMMENDED FURTHER READING</b>			
Current literature in meta-science, history of science and philosophy of science.			
<b>IV. ADDITIONAL INFORMATION</b>			
<b>ATTENDANCE</b>			
Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.			
<b>WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE</b>			
Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.			
<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>			
Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange a meeting.			
<b>INFORMATION ABOUT THE FINAL EXAM</b>			
There is no final exam for this course.			
<b>OTHER RELEVANT INFORMATION</b>			
Academic honesty			

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

**EXAM DATES**

Winter	N/A
Spring supplementary	N/A
Summer	12 June 2024 26 June 2024
Autumn supplementary	4 September 2024 11 September 2024

**V. COURSE OUTLINE**

DATE	TOPIC
Week 1	Introduction to the course. Replications and the Reform movement: from Psychology to Cognitive Sciences.
Week 2	Characteristics and positions of the 'reformers'
Week 3	Situating the reform movement from the perspective of Philosophy of Science
Week 4	Situating the reform movement from the perspective of Philosophy of Science
Week 5	Project preparation, Discussion
Week 6	Mandating Open Science: introducing the pre-registration debate
Week 7	Situating Open Science mandating from the perspective of Philosophy of Science
Week 8	Project preparation, Discussion
Week 9	Project
Week 10	Project

**VI. CONSTRUCTIVE ALIGNMENT**

LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Describe and analyse current topics in meta-science from different perspectives	Replicability, Reproducibility, Reform movement, Generalisability, Theory development, Pre-registration, Analytical flexibility, statistical inference, Open Science, Team Science	Lectures, Seminars, Discussions	Project-based assessment
Critically evaluate the work of the meta-scientific community	Philosophy of science, History of science.	Lectures, Seminars, Discussions	Project-based assessment



## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Open Science and Its Tools		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	2nd		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser	Dr. Ljerka Ostojic		
Course instructor	Contact Details 344		
Dr. Ljerka Ostojic	Email: <a href="mailto:lj.ostojic@uniri.hr">lj.ostojic@uniri.hr</a> , Phone: 051/669-217, Office: F-344, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>The aim of this course is to acquire theoretical and practical knowledge about tools that enable openness and transparency of research in various stages of the research process. You will learn about the challenges and benefits of Open Science approaches and tools. You will also learn how to put these tools into practice when planning, conducting, and publishing your own research.</p> <p>Topics covered include preprints, preregistration and registered reports, Open Data and Open Code, and Open Access publications.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• analyse the challenges and benefits of Open Science approaches and tools,</li> <li>• apply and adapt various Open Science tools to own research,</li> <li>• discuss benefits and suitability of various tools for different research,</li> <li>• discuss and make informed decisions about using Open Science approaches and tools in own work.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	x
II. COURSE EVALUATION AND GRADING CRITERIA			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	
Class attendance	0.67		

<b>Class participation</b>	1.33	50
<b>Project-based assessment</b>	1	50
<b>TOTAL</b>	3	100

To obtain a grade for this course, students must i) actively participate in class (maximum points: 50) and ii) participate in a (group) project (maximum points: 50).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Fecher, B. & Friesike, S. (2014). Open science: one term, five schools of thought. In *Opening science* (pp. 17-47). Cham: Springer.
- McKiernan, E.C. et al. (2016). Point of view: How open science helps researchers succeed. *eLife*, 5, e16800.
- Allen, C. & Mehler, D.M. (2019). Open science challenges, benefits and tips in early career and beyond. *PLoS Biology*, 17(5), e3000246.
- Nosek, B.A. & Lindsay, D.S. (2018). Preregistration becoming the norm in psychological science. *APS Observer*, 31(3).
- Szollosi, A., Kellen, D., Navarro, D.J., Shiffrin, R., van Rooij, I., Van Zandt, T., & Donkin, C. (2019). Is preregistration worthwhile? *Trends in Cognitive Sciences*, 24(2), 94-95.
- Scheel, A.M., Schijen, M., & Lakens, D. An excess of positive results. *Comparing the standard Psychology literature with Registered Reports*. Preprint at <https://osf.io/p6e9c> (2020).
- Hunter, J. (2012). Post-publication peer review: opening up scientific conversation. *Frontiers in Computational Neuroscience*, 6(63). <https://doi.org/10.3389/fncom.2012.00063>
- Kirkham, J. & Moher, D. (2018). Who and why do researchers opt to publish in post-publication peer review platforms? – findings from a review and survey of F1000 Research. *F1000Research*, 7(920). <https://doi.org/10.12688/f1000research.15436.1>
- Sarabipour, S., Debat, H.J., Burgess, S.J., Schwesinger, B., & Hensel, Z. (2019). On the value of preprints: An early career researcher perspective. *PLoS Biology*, 17(2), e3000151. <https://doi.org/10.1371/journal.pbio.3000151>

#### RECOMMENDED FURTHER READING

- Desjardins-Proulx, P., White, E.P., Adamson, J.J., Ram, K., Poisot, T., & Gravel, D. (2013). The case for open preprints in biology. *PLoS Biology*, 11(5), e1001563. <https://doi.org/10.1371/journal.pbio.1001563>
- Berg, J.M. et al. (2019). Preprints for the life sciences. *Science*, 352(6288), 899-901. <https://doi.org/10.1126/science.aaf9133>

### IV. ADDITIONAL INFORMATION

#### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

#### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

<b>WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS</b>			
Students can talk to their course instructor in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact the lecturer in advance to arrange a meeting.			
<b>INFORMATION ABOUT THE FINAL EXAM</b>			
There is no final exam for this course.			
<b>OTHER RELEVANT INFORMATION</b>			
<b>Academic honesty</b> Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.			
<b>EXAM DATES</b>			
Winter	N/A		
Spring supplementary	N/A		
Summer	12 June 2024 26 June 2024		
Autumn supplementary	4 September 2024 11 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 1	Module 1: Open Science. Intro to the course. Introduction to the class project		
Week 2	Module 2: Planning research		
Week 3	Module 2: Planning research - Pre-registrations		
Week 4	Module 2: Planning research - Data Management and Data Analysis		
Week 5	Invited lecture and discussion		
Week 6	Module 3: Dissemination - different options, different licences. Open Dough game		
Week 7	Module 3: Dissemination - Pre-prints		
Week 8	Module 3: Dissemination - Alternatives routes to disseminating research findings. The future of publishing		
Week 9	Hackathon (Open Science Handbook)		
Week 10	Round Table: Challenges and Benefits of Open Science for ECRs and Beyond		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Analyse the challenges and benefits of Open Science approaches and tools	Planning research, Disseminating research	Lectures, Seminars	Discussion, Project
Apply and adapt various Open Science tools to own research	Planning research, Disseminating research	Seminars, Hackathon, Project	Project
Discuss benefits and suitability of various tools for different research	Introduction to Open Science, Planning research, Disseminating research	Lectures, Seminars, Project	Discussion (including Round Table), Project
Discuss and make informed decisions about using Open Science	Introduction to Open Science, Planning research, Disseminating	Seminars, Hackathon, Project	Discussion (including Round Table), Project

approaches and tools in own work	research		
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**SYLLABUS**

KEY INFORMATION ABOUT THE COURSE	
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<b>Course title</b>	Philosophy of Science
<b>Study programme</b>	Masters in Cognitive Sciences: Cognition and the Mind
<b>Semester</b>	2nd
<b>Academic year</b>	2023/2024
<b>ECTS credits</b>	3
<b>Contact hours (Lectures + Seminars + Practical work)</b>	30+0+0
<b>Time and venue of classes</b>	TBC
<b>Language of instruction</b>	English
<b>Course organiser</b>	Prof. Predrag Šustar
<b>Course instructors</b>	<b>Contact Details</b>
Dr. Zdenka Brzović	Email: <a href="mailto:zdenka@ffri.uniri.hr">zdenka@ffri.uniri.hr</a> , Phone: 051/265-795, Office: F-413, Office Hours: TBA
Prof. Predrag Šustar	Email: <a href="mailto:psustar@ffri.uniri.hr">psustar@ffri.uniri.hr</a> , Phone: 051/265-601, Office: F-413, Office Hours: TBA

I. DETAILED COURSE DESCRIPTION
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<b>COURSE OVERVIEW</b>
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In this course, you will engage with contemporary science from the perspective of philosophy of science and work towards clarifying potential interactional influences between philosophy of science and corresponding scientific disciplines.

Topics will include epistemological priority of science, scientific inferences, scientific explanations, prediction and intervention, scientific realism and anti-realism (instrumentalism), progress in science and scientific revolutions, philosophical problems in special sciences (biology, psychology, neuroscience), and science and society.

<b>EXPECTED LEARNING OUTCOMES</b>
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- explain recent discussions within contemporary philosophy of science,
- defend different philosophical positions within discussions on contemporary philosophy of science.

<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>
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<b>Lectures</b>	<b>Seminars</b>	<b>Practical work</b>	<b>Independent work</b>
x	x		x
<b>Fieldwork</b>	<b>Laboratory work</b>	<b>Mentoring</b>	<b>Other</b>
		x	x

II. COURSE EVALUATION AND GRADING CRITERIA
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<b>ASSESSMENT COMPONENT</b>	<b>ECTS CREDIT ALLOCATION</b>	<b>MAXIMUM POINTS (% OF TOTAL)</b>
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Class attendance	1	
Class participation	1	40
Seminar Paper	1	60
<b>TOTAL</b>	3	<b>100</b>

To obtain a grade for this course, students must i) actively engage in the class (maximum points: 40) and ii) submit a seminar paper (maximum points: 60).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Okasha, Samir (2004). *Philosophy of Science: A Very Short Introduction*. Oxford University Press.
- Godfrey-Smith, Peter (2003). *Theory and Reality: An Introduction to the Philosophy of Science*. Chicago University Press.
- Philip Kitcher and Gillian Barker (2014). *Philosophy of Science: A New Introduction*. Oxford University Press.

#### RECOMMENDED FURTHER READING

- Samir Okasha (2019). *Philosophy of Biology: A Very Short Introduction*. Oxford University Press.
- Godfrey Smith, Peter (2014). *Philosophy of Biology*. Princeton University Press.

### IV. ADDITIONAL INFORMATION

#### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

#### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

#### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that students contact lecturers in advance to arrange a meeting.

#### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

#### OTHER RELEVANT INFORMATION

##### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

#### EXAM DATES

Winter	N/A		
Spring supplementary	N/A		
Summer	20 June 2024 4 July 2024		
Autumn supplementary	5 September 2024 12 September 2024		
<b>V. COURSE OUTLINE</b>			
<b>DATE</b>	<b>TOPIC</b>		
Week 1	Introduction: What is science		
Week 2	Problems of induction		
Week 3	Popper's falsificationism		
Week 4	Falsificationism and the importance of auxiliary assumptions		
Week 5	Kuhn and normal science		
Week 6	Kuhn on scientific revolutions		
Week 7	Theory and observation		
Week 8	Evidence: problems for theories of confirmation		
Week 9	Bayesianism		
Week 10	Scientific realism and antirealism		
Week 11	The sociology of science		
Week 12	Science and values		
Week 13	Feministic critiques of science		
Week 14	The social organization of science		
Week 15	Science and public policy		
<b>VI. CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Explain recent discussions within contemporary philosophy of science,	All topics covered in the course	Lectures, Discussion, Close reading of the text	Discussion, Seminar paper
Defend different philosophical positions within discussions on contemporary philosophy of science.	Topics 4, 6, 7, 10, 12, 13, 14, 15	Lectures, Discussion, Close reading of the text	Discussion, Seminar paper

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Foundations and Current Topics in Philosophy of Mind		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	2nd		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organisers	Prof. Luca Malatesti, Dr. Marko Jurjako		
Course instructor	<b>Contact Details</b>		
Prof. Luca Malatesti	Email: <a href="mailto:llatesti@ffri.uniri.hr">llatesti@ffri.uniri.hr</a> , Phone: 051/265-650, Office: F-422, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>In this course, you will engage with the most significant modern and contemporary philosophical theories that deal with the question of the nature of the mind and the relationship between the mind and the body.</p> <p>We will cover the following topics: the relationship between the mind and the body; René Descartes and dualism (the mind and the body as separate and distinct substances); arguments in favour and against Cartesian dualism; physicalist or materialist theories in philosophy of mind; arguments against physicalist explanations; the role of thought experiments in science and research on the mind.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• describe the development of the debate on the relationship between the mind and the body from René Descartes to contemporary functionalism,</li> <li>• explain the physicalist/materialist foundations of contemporary approaches to research of the mind,</li> <li>• distinguish types of physicalism,</li> <li>• analyse the most important arguments against physicalism, especially those based on the hard problem of consciousness and the peculiarities of mental content,</li> <li>• analyse the role of thought experiments in science,</li> <li>• evaluate and use deductive arguments in research on the mind.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	
II. COURSE EVALUATION AND GRADING CRITERIA			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	

Class attendance	0.67	
Continuous assessment 1 and 2	2.33	100
TOTAL	3	100

To obtain the final grade students must successfully pass the Continuous Assessment tasks (Continuous assessment 1 – exam-style assessment, maximum points: 40; Continuous assessment 2 – essay-style assessment, maximum points: 60).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Bayne, T. 2022a. *Philosophy of Mind: An Introduction*. Routledge, Taylor & Francis Group. (Chapter 6).
- Bermúdez, J. L., 2007. What is at stake in the debate about nonconceptual content? *Philosophical Perspectives*, 21(1): 55–72.
- Frankish, K. 2016. Illusionism as a Theory of Consciousness. *Journal of Consciousness Studies*, vol. 23, no. 11–12, 2016, pp. 11–39.
- Horgan, T., and J. Tienson. 2002. "The Intentionality of Phenomenology and the Phenomenology of Intentionality." In D. Chalmers, ed. *Philosophy of Mind: Classical and Contemporary Readings*. Oxford: Oxford University Press, 520-533.
- Kim, J. 2010. *Philosophy of Mind*. 3<sup>rd</sup> Edition. Boulder, Co.: Westview Press. (Chapters 2, 3, 4, 5, 10).
- Rey, G. 2007. "Resisting Normativism in Psychology." In B. P. McLaughlin and J. Cohen, eds. *Contemporary Debates in Philosophy of Mind*. Oxford: Blackwell, 69-84.

#### RECOMMENDED FURTHER READING

- Bayne, T. 2022b. The Puzzle of Cognitive Phenomenology. In *Oxford Studies in Philosophy of Mind*, vol. 2. Oxford University Press, 3–35.
- Dennett, Daniel C. 'Quining Qualia'. In *Consciousness in Modern Science*, edited by A. Marcel and E. Bisiach. Oxford: Oxford University Press, reprinted in Chalmers D. (ed). 2002. *Philosophy of mind: contemporary and classical readings*, New York: Oxford University Press. str. 226-246, 1988.
- Crane, T. 2001. *The Elements of Mind: An Introduction to the Philosophy of Mind*. Oxford: Oxford University Press (pp. 34-58).
- Fodor, J. 2007. The revenge of the given. In B. P. McLaughlin and J. Cohen, eds. *Contemporary Debates in Philosophy of Mind*. Oxford: Blackwell, 105-116.
- Kim, J. 2007. Causation and Mental Causation. In B. P. McLaughlin and J. Cohen, eds. *Contemporary Debates in Philosophy of Mind*. Oxford: Blackwell, 225-226.
- McLaughlin, B. P. and Cohen, J. eds. 2007. *Contemporary debates in philosophy of mind*. Oxford: Blackwell Publishing
- Neander K., 2008. Teleological Theories of Mental Content: Can Darwin Solve the Problem of Intentionality? in M. Ruse (ed.), *The Oxford Handbook of Philosophy of Biology*. Oxford: Oxford University Press, pp. 381–409.
- Nagel, T. 1974. What is it Like to be a Bat? *Philosophical Review* 83: 435–450. Reprinted in D. Chalmers, ed. 2002. *Philosophy of Mind: Classical and Contemporary Readings*. Oxford: Oxford University Press, 219-225.
- Polger, Thomas W., and Lawrence A. Shapiro. 2016. *The Multiple Realization Book*. New York: Oxford University Press
- Rupert R. 2008. Causal Theories of Mental Content, *Philosophy Compass*, 3(2): 353–80.



- Ryle, G. 1949. *The Concept of Mind*. London: Hutchinson. With an introduction by D. Dennett, Penguin: London, 1980. (Chapter 1)
- Smart, J. J. C. 1959. Sensations and Brain Processes. In C. V. Borst ed. *The Mind/Brain Identity Theory*. London: Macmillan, 1970, pp. 52-66.
- Smithies, D. 2013. The Nature of Cognitive Phenomenology. *Philosophy Compass*, 8(8): 744–54.
- Wedgwood, R. 2007. Normativism defended. In B. P. McLaughlin and J. Cohen, eds. *Contemporary Debates in Philosophy of Mind*. Oxford: Blackwell, 85-10.

#### IV. ADDITIONAL INFORMATION

##### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

##### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

##### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that student contact the lecturer in advance to arrange a meeting.

##### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

##### OTHER RELEVANT INFORMATION

###### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

##### EXAM DATES

Winter	N/A
Spring supplementary	N/A
Summer	10 June 2024 19 July 2024
Autumn supplementary	2 September 2024 13 September 2024

#### V. COURSE OUTLINE

DATE	TOPIC
Week 1	Module 1: Introduction to Philosophy of mind. Philosophical behaviourism against the Cartesian legacy
Week 2	Module 2: Reductionisms in the philosophy of mind
Week 3	Module 3: Functionalism and multiple realisation
Week 4	Module 4: Consciousness – Against the naturalisation of phenomenal consciousness
Week 5	Continuous assessment - Written exam on materials covered in Modules 1-3
Week 6	Module 4: Consciousness – Deflating phenomenal consciousness: eliminativism and illusionism
Week 7	Module 5: Mental content – The naturalisation of intentionality
Week 8	Module 5: Mental content – Interpretationism and normativism about intentionality

Week 9	Module 5: Mental content - Non conceptual content		
Week 10	Module 6: Consciousness and mental content		
<b>VI . CONSTRUCTIVE ALIGNMENT</b>			
<b>LEARNING OUTCOMES</b>	<b>CONTENT</b>	<b>TEACHING AND LEARNING ACTIVITIES</b>	<b>ASSESSMENT TASKS</b>
Describe the development of the debate on the relationship between the mind and the body from René Descartes to contemporary functionalism	René Descartes, Gilbert Ryle, J. C. C. Smart, Hilary Putnam, Jerry Fodor, Thomas Nagel, Frank Jackson, David Chalmers, Daniel Dennett, Fred Dretske, Jaegwon Kim,	Lectures, Seminars	Continuous assessment (exam-style assessment)
Explain the physicalist/materialist foundations of contemporary approaches to research of the mind	Substance, attribute, property, categorical mistake, disposition, intertheoretical reduction, bridge principle, functional analysis, multiple realisation, supervenience, phenomenal consciousness, qualia, intentionality, mental content, non-conceptual content, causal closure of the physical, no overdetermination	Lectures, Seminars	Continuous assessment (exam-style assessment)
Distinguish types of physicalism	Substance dualism; property dualism; analytic behaviourism; functionalism; eliminativism and illusionism about consciousness; interpretationism about content; teleosemantics, intentionalism,	Lectures, Seminars	Continuous assessment (exam-style assessment)
Analyse the most important arguments against physicalism, especially those based on the hard problem of consciousness and the peculiarities of mental content	Descartes's argument from clear and distinct ideas for dualism, the knowledge argument, the conceivability argument, non-reductive normativist accounts of mental content	Lectures, Seminars	Continuous assessment (exam-style assessment)
Analyse the role of thought experiments in science	The conceivability arguments, different notions of possibility.	Lectures, Seminars	Continuous assessment (exam-style assessment)
Evaluate and use deductive arguments in research on the mind	Deductive arguments for: dualism, for non-reductive physicalism, for the non-reducibility of consciousness, for the non-reducibility of mental content	Lectures, Seminars	Continuous assessment (essay-style assessment)

## SYLLABUS

KEY INFORMATION ABOUT THE COURSE			
Course title	Developing Minds		
Study programme	Masters in Cognitive Sciences: Cognition and the Mind		
Semester	2nd		
Academic year	2023/2024		
ECTS credits	3		
Contact hours (Lectures + Seminars + Practical work)	10+10+0		
Time and venue of classes	TBC		
Language of instruction	English		
Course organiser	Dr. Ljerka Ostojić		
Course instructors	<b>Contact Details</b>		
Dr. Edward Legg	Email: <a href="mailto:edward.legg@uniri.hr">edward.legg@uniri.hr</a> , Phone: 051/669-217, Office: 344, Office Hours: TBA		
I. DETAILED COURSE DESCRIPTION			
<b>COURSE OVERVIEW</b>			
<p>In this course, we will work through selected topics in research on the development of cognition, contemporary discussions on the development of cognition as well as empirical studies that present the base of these discussions.</p>			
<b>EXPECTED LEARNING OUTCOMES</b>			
<ul style="list-style-type: none"> <li>• identify the main discussions in research on cognitive development,</li> <li>• evaluate benefits and challenges of different empirical approaches to study cognitive development,</li> <li>• critically assess results of empirical studies in cognitive development as well as their link to theories on development,</li> <li>• discuss chosen research fields within developmental psychology.</li> </ul>			
<b>WAYS IN WHICH THE COURSE IS DELIVERED (mark with 'X')</b>			
Lectures	Seminars	Practical work	Independent work
x	x		x
Fieldwork	Laboratory work	Mentoring	Other
		x	
II. COURSE EVALUATION AND GRADING CRITERIA			
ASSESSMENT COMPONENT	ECTS CREDIT ALLOCATION	MAXIMUM POINTS (% OF TOTAL)	
Class attendance	0.67		
Class participation	1	30	
Seminar paper	1.33	70	
<b>TOTAL</b>	<b>3</b>	<b>100</b>	

To obtain a grade on this course, students must i) participate in class discussions and other tasks during classes (maximum points: 30) and submit one seminar paper (maximum points: 70).

Detailed information about all graded elements will be given and discussed in the first lecture.

Final grades will be determined as follows:

GRADE	UNDEGRADUATE AND GRADUATE PROGRAMMES
5 (A)	90 – 100 % points
4 (B)	75 – 89.9 % points
3 (C)	60 – 74.9 % points
2 (D)	50 – 59.9 % points
1 (F)	0 – 49.9 % points

### III. READING

#### MANDATORY READING

- Spelke, E. S., & Kinzler, K. D. (2007). Core knowledge. *Developmental Science*, 10(1), 89–96. doi:10.1111/j.1467-7687.2007.00569.x
- Gopnik, A. (1996). The Scientist as Child. *Philosophy of Science*, 63(4), 485–514. doi:10.1086/289970
- Tenenbaum, J. B., Kemp, C., Griffiths, T. L., & Goodman, N. D. (2011). How to Grow a Mind: Statistics, Structure, and Abstraction. *Science*, 331(6022), 1279–1285. doi:10.1126/science.1192788
- Kubricht, J. R., Holyoak, K. J., & Lu, H. (2017). Intuitive Physics: Current Research and Controversies. *Trends in Cognitive Sciences*, 21(10), 749–759. doi:10.1016/j.tics.2017.06.002
- Kuhl, P. K. (2004). Early language acquisition: cracking the speech code. *Nature Reviews Neuroscience*, 5(11), 831–843. doi:10.1038/nrn1533
- Suddendorf, T. (2017). The Emergence of Episodic Foresight and Its Consequences. *Child Development Perspectives*, 11(3), 191–195. doi:10.1111/cdep.12233
- Hamlin, J. K. (2013). Moral Judgment and Action in Preverbal Infants and Toddlers. *Current Directions in Psychological Science*, 22(3), 186–193. doi:10.1177/0963721412470687
- Poulin-Dubois, D. (2020). Theory of mind development: State of the science and future directions. *Progress in Brain Research*. doi:10.1016/bs.pbr.2020.05.021

#### RECOMMENDED FURTHER READING

Contemporary literature about cognitive development.

### IV. ADDITIONAL INFORMATION

#### ATTENDANCE

Attendance is mandatory. Students are allowed to miss no more than 30% of all classes without penalty.

#### WAYS IN WHICH STUDENTS WILL BE NOTIFIED ABOUT THIS COURSE

Students will be notified over email, Moodle (Merlin), and any other agreed upon platforms.

#### WAYS IN WHICH STUDENTS CAN COMMUNICATE WITH COURSE INSTRUCTORS

Students can talk to their course instructors in and after class, contact them over email or Moodle, and during office hours. It is recommended that student contact the lecturer in advance to arrange a meeting.

#### INFORMATION ABOUT THE FINAL EXAM

There is no final exam for this course.

#### OTHER RELEVANT INFORMATION

##### Academic honesty

Any use of texts or other types of work by another author, as well as the use of ChatGPT or other tools whose function is based on AI technology, without a clear and unambiguous citation of the source is considered a violation of academic integrity principles, and is a serious offence regulated by the Ordinance on Student Responsibilities.

EXAM DATES			
Winter	N/A		
Spring supplementary	N/A		
Summer	12 June 2024 26 June 2024		
Autumn supplementary	4 September 2024 11 September 2024		
V. COURSE OUTLINE			
DATE	TOPIC		
Week 1	Introduction to the course, Overview of current and historical issues in cognitive development		
Week 2	Methods for studying cognitive development		
Week 3	Development of fundamental cognitive processes		
Week 4	Locomotion and navigation		
Week 5	Causal and physical cognition		
Week 6	Numerical cognition		
Week 7	Reasoning about agents		
Week 8	Theory of Mind and morality		
Week 9	Categorisation and concepts		
Week 10	Language acquisition: syntax and grammar		
VI. CONSTRUCTIVE ALIGNMENT			
LEARNING OUTCOMES	CONTENT	TEACHING AND LEARNING ACTIVITIES	ASSESSMENT TASKS
Identify the main discussions in research on cognitive development	Overview of current and historical issues in cognitive development	Lectures	Seminar paper, Discussions
Evaluate benefits and challenges of different empirical approaches to study cognitive development	Methods for studying cognitive development	Lectures, Seminars, Discussions	Seminar paper, Discussions
Critically assess results of empirical studies in cognitive development as well as their link to theories on development	Development of fundamental cognitive processes, Locomotion and navigation, Causal and physical cognition, Numerical cognition, Reasoning about agents, Theory of Mind, Morality, Categorisation and concepts, Language acquisition	Lectures, Seminars, Discussions	Seminar paper, Discussions
Discuss chosen research fields within developmental psychology	Development of fundamental cognitive processes, Locomotion and navigation, Causal and physical cognition, Numerical cognition, Reasoning about agents, Theory of Mind, Morality, Categorisation and concepts, Language	Lectures, Seminars, Discussions	Seminar paper, Discussions

	acquisition		
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