

changFORM OB-1

OBRAZAC ZA IZMJENE I DOPUNE STUDIJSKIH PROGRAMA

General Information	
Name of the study programme	Cognitive Sciences: Cognition and the Mind
Type of the study programme	Graduate university study
Provider of the study programme	Faculty of Humanities and Social Sciences in Rijeka
Institution implementing the study programme	Faculty of Humanities and Social Sciences in Rijeka
Academic/vocational title awarded upon completion of the study programme	Magistar/Magistra kognitivnih znanosti (students are awarded the Croatian academic title; translation: Master of Cognitive Sciences)
Name and code of the qualification in the CROQF Register for which the study program meets the requirement of minimum common learning outcomes (if applicable)	-
Month and year of last MZO (ministry) authorization/certificate for the programme	January 2022.
Month and year of last changes and addenda of the study programme (Senate confirmed)	April 2025.

1. Types of changes and addenda that are proposed
1.1. Introduction, deletion, or change of a specific learning outcome at the level of the study programme, module or course that influences the learning outcomes at the programme level
One new learning outcome has been introduced. The new outcome was added for the newly introduced elective course that support students Academic Development (see 1.2.), which is not summatively graded and that was added as a new elective course instead of the previous two electives aimed at supporting students, <i>Academic English</i> and <i>Advanced Statistical Methods</i>. The newly introduced course contains the learning outcomes of the two courses that were cut, while providing wider support to student. As such, one new learning outcome was required.
1.2. Introduction or removal of an existing study module or course, which influences the learning outcomes at the programme level
One new elective course has been introduced - <i>Academic Development</i>, which is not summatively graded and that was added as a new elective course instead of the previous two electives aimed at supporting students, <i>Academic English</i> and <i>Advanced Statistical Methods</i>. The newly introduced course contains the learning outcomes of the two courses that were cut, while providing wider support to student. As such, one new learning outcome was required (see 1.1).
Another new elective course was added – <i>Internship</i> (in a 3 ECTS and 6 ECTS version), with a new learning outcome for this course.
1.3. Other changes and addenda

- Instruction innovation: project work was improved in the courses *Ethics*, *Science Communication 1*, *Science Communication 2*, and *Elective Modules in Cognitive Sciences*. In the course *Ethics*, the student projects are presented at an event intended for academic and wider audiences *ConScience*, that is held every year by the Chair of Cognitive sciences in collaboration with the students. When it is possible, the projects are published under CC-BY-NC licenses. In the course *Science Communication 1* project work is introduced that aims to present the cognitive sciences to a wider audience (especially children). In the course *Science Communication 2* students used to work on a project that follows their thesis work – because of previous experience with students taking the course, the students will their project either use on their own social networks or the project will be presented on the website and social networks of the programme. Students may request an embargo until the successful defense of their thesis. The elective course *Elective Modules in Cognitive Sciences* already includes project work that is improved in some modules by, when possible, publishing the student projects under CC-BY-NC licenses. This improvement is especially aimed at elective modules *Philosophy of Science* (project aimed at the development of educational games about philosophy of science) and *Open Science and Its Tools* (project aimed at the development of educational materials about Open Science).
- Instruction innovation: involving students in research as part of the courses *Preparation of Masters Thesis 1 and 2* and *Internship*. In the course *Preparation of Masters Thesis 1* students are involved in research by organizing the event *CogSci Masters Posters*, while in *Preparation of Master Thesis 2* students are involved by giving an oral presentation as part of the international symposium *Rijeka Cognitive Sciences Symposium* that will be organized annually. The event will on the first day include a *Student Symposium*. In the course *Internship*, research internships will be offered as part of the instructors' research projects or as continuation of the work of students in the courses *Rotation Project 1* and *Rotation Project 2*.
- Instruction innovation: a technical innovation is implemented as part of the course *Empirical Research Methods 2*: a digital platform that tracks the content of the course and offers students the opportunity to practice coding of experiments in real time.
- Instruction innovation: formal introduction of internships into the programme: students can acquire ECTS through internships in the courses *Preparation of Masters Thesis 1 and 2* if the internship is part of the thesis project or through the elective *Internship* that can be taken instead of the course *Elective Modules in Cognitive Sciences*.
- Changes in the formulation of learning outcomes at the programme level in order to consolidate them without changing their meaning, in line with the old collections of learning outcomes in the following way (the changes are showcased in the table in Appendix A):
 - The previous learning outcomes “to synthesize extensive professional literature”, “to clearly formulate arguments”, “to set up logical arguments”, and “to accurately use the terminology of specific disciplines and research areas” (the previous collection of learning outcomes called “Basic research processes”) are reformulated and consolidated into the new learning outcome “To synthesize extensive scientific literatures and use them to formulate own arguments”,

- The previous learning outcomes “to effectively look up literature according to current goals”, “to evaluate the literature from different disciplines and research areas within cognitive sciences”, “to critically evaluate the theory, methods, analyses, and inferences in the literature of different empirical disciplines and areas”, “to evaluate the validity (whether they logically lead to the conclusion) and reliability (if they are valid, are their premises true) of arguments in philosophical literature” (the previous collection of learning outcomes “Use of scientific literature”) are reformulated and consolidated into the new learning outcome “To effectively search and evaluate scientific literatures from various fields of the cognitive sciences”,
- The previous learning outcomes “to connect concepts, approaches and methods in different disciplines and areas within cognitive sciences”, “to identify areas with interdisciplinary work”, “to identify barriers to interdisciplinary work in specific areas”, “to analyse challenges to interdisciplinary work within cognitive sciences” (the previous collection of learning outcomes “Interdisciplinary work in cognitive sciences”) are reformulated and consolidate into the new learning outcome “To identify and analyse the approaches and barriers to interdisciplinary work in the cognitive sciences”,
- The previous learning outcomes “to discuss the benefits and challenges of formalised theory”, “to compare approaches to theory development between disciplines and fields within cognitive sciences”, “to analyse procedures for the construction of cognitive models”, “to describe the relationship between theory and cognitive models by critically assessing the adequacy of the cognitive models”, “to evaluate models and theories in cognitive sciences” (the previous collection of learning outcomes “Theory development”) are reformulated and consolidated into the new learning outcome “To synthesise and evaluate models and theoretical approaches in the cognitive sciences”,
- The previous learning outcomes “to identify the relationship between design, statistical analysis and possible conclusions”, “to plan research according to the above analysis”, “to plan critical elements of research (sample size, analysis, stopping criteria, etc.)”, “to perform data collection”, “to describe and analyse data using adequate methods”, “to critically interpret results (including assessing the generalisability and replicability of the research)” (the previous collection of learning outcomes “Advanced application of empirical methods and independent research”) are reformulated and consolidated into the new learning outcome “Synthesise and evaluate empirical research methods and their use and planning in own research”,
- The previous learning outcomes “to independently conceptualise a project”, “to define a working plan and a research plan”, “to critically evaluate the benefits of a project”, “to plan and consider ethical aspects of the project (e.g., applying for permits)”, “to organise work on a collaborative project (i.e., when a team of researchers is working on a project)” (the previous collection of learning outcomes “Project Management”) are reformulated and consolidated into the learning outcome “To manage projects”,
- The previous learning outcomes “to visualise data and relationships between variables”, “to choose ways to share and manage data appropriately, depending on the specific research area”, “to plan and perform data analyses”, “to implement steps to ensure reliability of

- analyses” (the previous collection of learning outcomes “Data Science and data analysis”) are reformulated and consolidated into the new learning outcome “to visualise and analyse data”,
- The previous learning outcomes “to code statistical analyses (e.g., in R)”, “to implement steps to ensure code reproducibility”, “to code cognitive experiments and - where relevant - use online platforms to carry out data collection”, “to effectively use project management platforms”, “to use different data management platforms” (the previous collection of learning outcomes “Digital skills”) are reformulated and consolidate into the new learning outcome “to use and develop digital skills for coding experiments, data management and processing”,
 - The previous learning outcomes “to write a scientific paper in a chosen discipline or area”, “to design and give an oral presentation”, “to design a poster and present it”, “to design and give a presentation to the general public”, “to adapt presentations to a target audience”, “to implement steps to ensure accessibility of materials and resources” (the previous collection of learning outcomes “Dissemination of research”) are reformulated and consolidated into the new learning outcome “to design and implement the dissemination of research for various audiences and with different methods”,
 - The previous learning outcomes “to use Open Science tools to increase the transparency and openness of research (in empirical research: data, materials, methods, analysis, registrations)”, “to plan dissemination of research that ensures availability to the public”, “to identify challenges of the above processes”, “to evaluate the relevance and usefulness of Open Science (tools) for specific research areas”, “to evaluate the literature according to the principles of Open Science” (the previous collection of learning outcomes “Open Science”) are reformulated and consolidated into the new learning outcome “To plan, use, and evaluate the tools and approaches to Open Science”,
 - The previous learning outcomes “to identify and synthesise questions about ethics in cognitive sciences”, “to design studies according to ethical principles and regulations”, “to analyse possible uses and risks of misuse of data and results”, “to describe and discuss the role of ethics in empirical research in cognitive sciences from the perspective of philosophy” (the previous collection of learning outcomes “Ethics in cognitive sciences”) are reformulated and consolidated into the new learning outcome “To synthesise and evaluate ethical principles of science and implement them”
 - The previous learning outcomes “to formulate professional objectives”, “to identify steps to achieve the above objectives”, “to design a time management plan”, “to identify own skills, knowledge and experiences”, “to formulate and present personal skills, knowledge and experiences for professional purposes” (the previous collection of learning outcomes “Personal and professional development”) are reformulated and consolidated into the new learning outcome “to formulate and plan personal and professional development”,
 - The previous learning outcomes “to identify the writing style for different ways of dissemination”, “to adapt the writing style for general journals vs. specialized journals”, “to constructively review others’ work”, “to give constructive criticism and comments on the work of colleagues”, “to organise work with multiple co-authors” (the previous collection of learning outcomes “Advanced writing skills in cognitive sciences”) are reformulated and consolidated

into the new learning outcome “to evaluate and use advanced writing skills in writing and reviewing in cognitive sciences”,

- The previous learning outcomes “to analyse the role of philosophy in cognitive sciences”, “to evaluate the use of results from empirical cognitive sciences from a philosophical perspective”, “to phrase arguments based on personal reading of philosophical problems” (the previous collection of learning outcomes “the role of philosophy in cognitive sciences and related disciplines”) are reformulated and consolidated into the new learning outcome “to analyse and evaluate the role of philosophy in cognitive sciences”,
 - The previous learning outcomes “to evaluate neuroscientific methods in studies on cognition and the mind”, “to analyse the application of brain imagining in studies on cognition”, “to identify challenges in neuroscience studies investigation cognition and the mind”, “to analyse the integration of neuroscientific and behavioural methods in studies on cognition” (the previous collection of learning outcomes “Integration of neuroscience and behavioural studies in cognitive sciences”) are reformulated and consolidated into the new learning outcome “to analyse and evaluate the role of neuroscience in cognitive sciences”,
 - The previous learning outcomes “to link concepts, approaches, and methods of research on human cognition and of research on non-human cognition”, “to identify the impact of research on human cognition on research on non-human cognition, and vice versa”, “to evaluate the approaches and methods of comparative studies”, “to identify challenges of comparative studies” (the previous collection of learning outcomes “Integration of research on cognition and the mind in humans and non-human animals”) are reformulated and consolidated into the new learning outcome “to analyse and evaluate the role of comparative research of cognition in cognitive sciences”,
 - The previous learning outcomes “to analyse theory, approaches, and methods in selected research areas in cognitive sciences (e.g., cognitive linguistics, neuroscience, comparative cognitive science, Artificial Intelligence, etc.)”, “to evaluate theory, approaches, and methods in selected research areas in cognitive sciences”, “to identify challenges in cognition research in selected research areas in cognitive sciences”, “to link theory, approaches, and methods in selected areas in cognitive sciences with concepts and problems from philosophy of mind”, “to link theory, approaches, and methods in selected areas in cognitive sciences with discussions from philosophy of science”, “to evaluate the work in selected research areas in cognitive sciences from the perspective of developing theories and models” (the previous collection of learning outcomes “Advanced knowledge and skills in selected research areas in cognitive sciences”) are reformulated and consolidated into the new learning outcome “to analyse and evaluate selected areas of research in the cognitive sciences from the perspectives of theory development and philosophy”
- The formulation of a number of learning outcomes in the electives *Elective Modules in Cognitive Sciences* and the course *Empirical Research Methods 2* was changed in order to consolidate and clarify the learning outcomes

- The number of teaching hours in the courses *Introduction to the Disciplines and Work in Cognitive Sciences*, *Journal Club 1 and 2*, *Preparation of Masters Thesis 1 and 2* was increased.
- Both the goals and the content of a number of courses was changed without changing their learning outcomes (courses *Introduction to the Disciplines and Work in Cognitive Sciences*, *Interdisciplinary Modules in Cognitive Sciences 1 and 2*, *Empirical Research Methods 1 and 2*, *Ethics*, *Elective Modules in Cognitive Sciences*).
- Smaller changes in the assessment in the courses *Science Communication 1 and 2*.
- The option to recognize work done at a different institution as internships within *Preparation of Masters Thesis 1 and 2* was added.
- Part of the content from the course *Empirical Methods 2* was moved to the course *Introduction to the Disciplines and Work in Cognitive Sciences* alongside the appropriate learning outcomes. The changes do not substantively change learning outcomes.
- Part of the content from the course *Empirical Methods 2* was moved to the course *Empirical Methods 1* alongside the appropriate learning outcomes. The changes do not substantively change learning outcomes.
- The course *Professional Development* was moved from the fourth to the third semester.
- All enrolment requirements for second year courses were changed.

2. Obrazložjenje zahtjeva za izmjenama i dopunama

2.1. Razlozi i obrazložjenje izmjena i dopuna studijskog programa

- It was decided to implement the new elective course for student support (the elective can be taken alongside other electives and it is not graded summatively). The new course is called *Academic Development* and it replaces two previous electives for student support (*Academic English* and *Advanced Statistical Methods*). The new course was introduced because there was a need to provide students with support in a more flexible way that presupposes different types of support. The new course offers students with individualized support. The course is offered in the first, second, and third semester. The second semester support also includes programming of experiments (following the content from the course *Empirical Research Methods 2*).
- The introduction of the new elective course *Internship* and the subsequent option to recognize ECTS credits in internships as part of the courses *Preparation of Masters Thesis 1 and 2* allows for the formalization of internships and the increase of practical competencies of the students. Until now, students who went on internships had them recognized as extracurricular activities. Our experience with the first three generations of students showed that they have sufficient interest in internships to formalize them into the study programme.
- The instruction innovation in various courses, that is related either to the implementation of innovative teaching methods or improving already existing teaching methods is important in order to maintain or improve the modern structure of the programme and to allow students better ways to present their work. All the suggested innovations in instruction are the

continuation of informal but successful attempts at implementing new teaching methods. The instruction innovation here just recognizes them formally.

- The consolidated learning outcomes at the level of the study programme were introduced in order to comply with reform guidelines of the Faculty of Social Sciences and Humanities (Smjernice za reformu prijediplomskih i diplomskih studijskih programa na Filozofskom fakultetu u Rijeci (ak. god 2025./2026.), KLASA: 602-01/26-01/31, URBROJ: 2170-1-41-01-26-2) and to clarify the learning outcomes.
- The changes in the formulation of several learning outcomes in the electives *Elective Modules in Cognitive Sciences* and the course *Empirical Research Methods 1* serve the purpose of consolidating and clarifying the learning outcomes in these courses.
- In view of the experience of the last three years, the teaching hours in the course *Introduction to the Disciplines and Work in Cognitive Sciences* were increased in order to improve the initial support for reading and writing among students. The teaching related to the workshop about academic integrity was necessary to comply with the university guidelines about the responsible use of AI tools. The increase in teaching hours in the courses *Journal Club 1* and *2* has the goal to improve the efficiency and ease in achieving the learning outcomes. The increase in teaching hours in the courses *Preparation of Masters Thesis 1* and *2* was necessary in order to formalize and recognize in the teaching norm the meetings with thesis supervisors.
- Changes in the formulation of the goals and content of courses without changing the learning outcomes were done in order to clarify the goals of particular courses.
- Changes in assessment methods in the courses *Science Communication 1* and *2* were done in order to clarify the assessment methods.
- The option to recognize internships as thesis work was added to the courses *Preparation of Masters Thesis 1* and *2* in order to formally recognize and allow the work of students on their thesis at other institutions.
- Moving some content from the course *Empirical Research Methods 1* into the course *Introduction to the Disciplines and Work in Cognitive Sciences* was done in order to allow students to learn about certain theories and models earlier which facilitates acquisition in other courses
- Moving some content from the course *Empirical Research Methods 2* to *Empirical Research Methods 1* allows for better consolidation of the content of the courses when it comes to experimental and non-experimental designs, while at the same time leaving more time for learning to program experiments
- The course *Professional Development* was moved from the fourth to the third semester because students tend to start applying to doctoral programs, jobs, and internships early in their studies
- The enrolment requirements in the second year courses were changed in order to increase student flexibility

2.2. Justification of the changes and addenda in the study programme in regards to the mission and strategic objectives of the higher learning institution and economic and social needs

All the changes were aimed at improving the study programme which means they are in line with the strategy of internationalization and improving the research competencies of students, as well as the reform guidelines for study programmes.

The changes in the courses *Academic Development* and *Journal Club 1* and *2* are in line with the teaching strategy, in particular with the goal to develop personalized approaches to learning.

All implemented changes were based on the lecturers' analysis of the programme that was communicated with three generations of students, taking into account their anonymous feedback in our internal evaluations during and after semester, which makes the changes in line with the goal: Continuously assess student satisfaction.

2.3. Assessment of the influence of particular changes and addenda on the learning outcomes of courses, programme and modules

We asses that the proposed changes and addenda to the study programme do not influence the learning outcomes of courses, programmes and modules. (0% change to learning outcomes).

2.4. Other relevant information according to the proposers

The English version of this form will be delivered after the changes and addenda are approved.

3.1. List of compulsory and elective courses and/or modules with the number of active/direct class hours required for their implementation and the number of ECTS credits - version with the highlighted changes to the existing programme

LIST OF COURSES ¹						
Year of study: 1						
Semester: 1						
COURSE	COURSE INSTRUCTOR	L	P	S	ECTS	STATUS ²
Introduction to the Disciplines and Work in Cognitive Sciences	dr. sc. Luca Malatesti dr. sc. Igor Bajšanski dr. sc. Ljerka Ostojić dr. sc. Edward Legg	~~48~~ 54		~~48~~ 54	7	C
Interdisciplinary Modules in Cognitive Sciences 1	dr. sc. Igor Bajšanski dr. sc. Marko Jurjako	26		13	6	C
Statistics	dr. sc. Petra Anić, dr. sc. Marko Tončić dr. sc. Sandra Arbula	18	18	18	5	C
Empirical Research Methods 1	dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula ~~izv. prof. dr. sc. Asmir Gračanin~~	18		18	5	C
Rotation Project 1	dr. sc. Ljerka Ostojić	2		16	4	C
Elective Modules in the Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
~~Academic English~~	~~dr. sc. Irena Vodopija-Krstanović~~	~~10~~		~~10~~	3	E
Academic Development	dr. sc. Edward Legg dr. sc. Ljerka Ostojić		10	5	2	E

¹ The table must be copied for each year of study.

² If a course is compulsory, write C, if elective, write E.

	dr. sc. Sandra Arbula dr. sc. Petra Anić dr. sc. Marko Tončić					
LIST OF COURSES ³						
Year of study: 1						
Semester: 2						
COURSE	COURSE INSTRUCTOR	L	P	S	ECTS	STATUS ⁴
Interdisciplinary Modules in Cognitive Sciences 2	dr. sc. Luca Malatesti dr. sc. Asmir Gračanin dr. sc. Igor Bajšanski dr. sc. Marko Jurjako dr. sc. Edward Legg	60		20	9	C
Ethics	dr. sc. Ljerka Ostojić	15		30	6	C
Empirical Research Methods 2	dr. sc. Edward Legg ~~dr. sc. Asmir Gračanin~~ dr. sc. Sandra Arbula	30		30	7	C
Rotation Project 2	dr. sc. Ljerka Ostojić	3		19	5	C
Elective Modules in Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
Academic Development	dr. sc. Edward Legg dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula dr. sc. Petra Anić dr. sc. Marko Tončić		10	5	2	E
LIST OF COURSES ²						
Year of study : 2						
Semester: 3						
COURSE	COURSE INSTRUCTOR	L	P	S	ECTS	STATUS ²
Preparation of Masters Thesis 1	dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula				20	C
Journal Club 1	dr. sc. Ljerka Ostojić dr. sc. Edward Legg			~~8~~ 20	2	C
Science Communication 1	dr. sc. Ljerka Ostojić	3		14	4	C
Elective Modules in Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
Professional Development	dr. sc. Ljerka Ostojić			12	2	C
Advanced Statistical Methods	~~dr. sc. Petra Anić~~ ~~dr. sc. Marko Tončić~~ ~~dr. sc. Sandra Arbula~~	~~10~~		~~10~~	3	E
Academic Development	dr. sc. Edward Legg		10	5	2	E

³ The table must be copied for each year of study.

⁴ If a course is compulsory, write C, if elective, write E.

	dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula dr. sc. Petra Anić dr. sc. Marko Tončić					
Internship	dr. sc. Ljerka Ostojić dr. sc. Edward Legg				3 or 6	E
LIST OF COURSES ²						
Year of study:2						
Semester: 4						
COURSE	COURSE INSTRUCTOR	L	P	S	ECTS	STATUS ²
Preparation of Masters Thesis 2	dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula				20	C
Journal Club 2	dr. sc. Ljerka Ostojić dr. sc. Edward Legg			8 16	2	C
Science Communication 2	dr. sc. Ljerka Ostojić	3		14	4	C
~~Professional Development~~	~~dr. sc. Ljerka Ostojić~~			~~12~~	~~2~~	~~C~~
Elective Modules in Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
Internship	dr. sc. Ljerka Ostojić dr. sc. Edward Legg				3 or 6	E

3.2. List of compulsory and elective courses and/or modules with the number of active/direct class hours required for their implementation and the number of ECTS credits - clean version of the study programme with changes included

LIST OF COURSES ⁵						
Year of Study: 1						
Semester: 1						
COURSE	COURSE INSTRUCTOR	L	P	S	ECTS	STATUS ⁶
Introduction to the Disciplines and Work in Cognitive Sciences	dr. sc. Luca Malatesti dr. sc. Igor Bajšanski dr. sc. Ljerka Ostojić dr. sc. Edward Legg	54		54	7	C
Interdisciplinary Modules in Cognitive Sciences 1	dr. sc. Igor Bajšanski dr. sc. Marko Jurjako	26		13	6	C
Statistics	dr. sc. Petra Anić, dr. sc. Marko Tončić dr. sc. Sandra Arbula	18	18	18	5	C
Empirical Research Methods 1	dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula	18		18	5	C

⁵ The table must be copied for each year of study.

⁶ If a course is compulsory, write C, if elective, write E.

	izv. prof. dr. sc. Asmir Gračanin					
Rotation Project 1	dr. sc. Ljerka Ostojić	2		16	4	C
Elective Modules in Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
Academic Development	dr. sc. Edward Legg dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula dr. sc. Petra Anić dr. sc. Marko Tončić		10	5	2	E
LIST OF COURSES⁷						
Year of study: 1						
Semester: 2						
COURSE	COURSE INSTRUCTOR	L	P	S	ECTS	STATUS ⁸
Interdisciplinary Modules in Cognitive Sciences 2	dr. sc. Luca Malatesti dr. sc. Asmir Gračanin dr. sc. Igor Bajšanski dr. sc. Marko Jurjako dr. sc. Edward Legg	60		20	9	C
Ethics	dr. sc. Ljerka Ostojić	15		30	6	C
Empirical Research Methods 2	dr. sc. Edward Legg dr. sc. Sandra Arbula	30		30	7	C
Rotation Project 2	dr. sc. Ljerka Ostojić	3		19	5	C
Elective Modules in Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
Academic Development	dr. sc. Edward Legg dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula dr. sc. Petra Anić dr. sc. Marko Tončić		10	5	2	E
LIST OF COURSES²						
Year of Study: 2						
Semester: 3						
COURSE	COUSE INSTRUCTOR	L	P	S	ECTS	STATUS ²
Preparation of Masters Thesis 1	dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula				20	C
Journal Club 1	dr. sc. Ljerka Ostojić dr. sc. Edward Legg			20	2	C
Science Communication 1	dr. sc. Ljerka Ostojić	3		14	4	C

⁷ The table must be copied for each year of study.

⁸ If a course is compulsory, write C, if elective, write E.

Elective Modules in Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
Professional Development	dr. sc. Ljerka Ostojić			12	2	C
Academic Development	dr. sc. Edward Legg dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula dr. sc. Petra Anić dr. sc. Marko Tončić		10	5	2	E
Internship	dr. sc. Ljerka Ostojić dr. sc. Edward Legg				3 or 6	E
LIST OF COURSES²						
Year of study:2						
Semester: 4						
COURSE	COURSE INSTRUCTOR	L	P	S	ECTS	STATUS ²
Preparation of Masters Thesis 2	dr. sc. Ljerka Ostojić dr. sc. Sandra Arbula				20	C
Journal Club 2	dr. sc. Ljerka Ostojić dr. sc. Edward Legg			16	2	C
Science Communication 2	dr. sc. Ljerka Ostojić	3		14	4	C
Elective Modules in Cognitive Sciences	dr. sc. Ljerka Ostojić dr. sc. Edward Legg dr. sc. Zdenka Brzović dr. sc. Sandra Arbula	12		12	3	E
Internship	dr. sc. Ljerka Ostojić dr. sc. Edward Legg				3 or 6	E

3.3. Description of all courses in the study programme

GENERAL INFORMATION		
Course instructor	dr. sc. Luca Malatesti, dr. sc. Igor Bajšanski, dr. sc. Ljerka Ostojić, dr. sc. Edward Legg	
Name of the course	Uvod u discipline i rad kognitivnih znanosti	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	obvezatan	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	7
	Number of class hours (L+P+S)	54+0+54
COURSE DESCRIPTION		
1.1. Course objectives		
This introductory course has three objectives: 1. to introduce students to the work in cognitive sciences, 2. to enable students from different undergraduate studies to complement their knowledge, and 3. to introduce students to the different ways of learning and teaching involved in the programme. To achieve objective 2, the course is divided into a compulsory component, an elective module (students choose one) and elective elements (students choose two). To achieve objective 3, this introductory course has a large number of hours of direct teaching (all work on the course is performed during direct teaching). The lecturers prepare students for future group and individual work by moderating and assisting students in acquiring skills for independent work and self-organisation. Note: The compulsory component of the course is organised for all students at the same time (week 1). Each elective module is organised once (weeks 2 to 6) because students either choose one or the other. Each elective element is – if necessary – organised twice (once in weeks 2 to 4, and once in weeks 4 to 6) to ensure that all students can enrol in those elective elements that best complement their prior training.		
1.2. Course enrolment requirements		
Enrolment in the Masters course.		
1.3. Expected learning outcomes		
Compulsory learning outcomes: 1. to describe and analyse disciplines and areas within cognitive sciences, 2. to compare different approaches and methods within cognitive sciences, 3. to analyse concepts connecting different disciplines. Elective learning outcomes: Module „Introduction to empirical cognitive sciences”: 1. to visualise and use descriptors for specific data distributions, 2. to describe and visualise relationships between a set of variables, 3. to describe the foundations of empirical research in cognitive sciences. Module „Introduction to philosophy of cognitive sciences “: 4. to competently read contemporary philosophical literature from philosophy of mind and philosophy of cognitive sciences,		

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

Elective elements:

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

1.4. Course content

Compulsory component: Introduction to the work of cognitive sciences (discipline overview; levels of explanation in cognitive sciences); interdisciplinarity in cognitive sciences; literature and its use in different disciplines within cognitive sciences.

Elective components:

Elective modules (students choose one):

Module „Introduction to empirical cognitive sciences”: introductory statistical methods (data description, bivariate description, graphical visualisation of data); introduction to empirical research methods (scientific methods in empirical cognitive sciences; comparison of scientific and non-scientific approaches to knowledge acquisition; measurements and measurement instruments; theories and hypotheses in empirical cognitive sciences)

Module „Introduction to the philosophy of cognitive sciences”: foundations of philosophy of cognitive sciences, introduction to philosophical research methods, introduction to philosophy of science

Elective elements (students choose two):

- Cognitive psychology: perception and attention; learning and memory; language: understanding, production and categorization; judgement and reasoning
- Neuropsychology and cognition: structure and functions of the nervous system; brain and behaviour – neural mechanisms of emotions, learning and memory, language and consciousness (normal functions and disfunctions); neurocognitive networks and connectome
- Comparative cognition: theories in comparative cognition; methodological approaches; main research areas and questions, concepts and issues
- Critical history of cognitive science and its methods: early development of cognitive science in the second half of the 20th century; debates that marked the development of cognitive sciences; cognitive sciences and the cultural context of the late 20th century; critical history of monodisciplinary methodologies on the example of psychology

1.5. Manner of instruction	☒ lectures	☒ individual assignments
	☒ seminars and workshops	☐ multimedia and network
	☐ practicals	☐ laboratory
	☐ distance learning	☒ mentorship
	☒ fieldwork	☐ other _____

1.6. Student responsibilities

Students are required to attend class, actively participate in class, and observe academic integrity.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project		Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

This course is not graded with a summative grade. During all elements of the course the students receive formative assessment (feedback from instructors). Students are awarded ECTS points if they attended class and actively participated in coursework.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Shaughnessy, J.J., Zechmeister, E.B. & Zechmeister, J.S. (2012). <i>Research methods in psychology</i> (9th ed.). McGraw-Hill.	5	20
Weiskopf, D.A., & Adams. F. (2015). <i>An introduction to the philosophy of psychology</i> . Cambridge University Press. [odabrana poglavlja].	1	20
Fosl, P.S., & Baggini, J. (2020). <i>The philosopher's toolkit: A compendium of philosophical concepts and methods</i> .	1	20
Martinich, A. (2001). <i>Philosophical writing: An introduction</i> (3rd ed.) Blackwell.	5	20
Bear, F.M., Connor, B.W., & Paradiso, M.A. (2016). <i>Neuroscience exploring the brain</i> . Philadelphia: Wolters Kluwer.	5	20
Kolb, B. & Whishaw, I.Q. (2003). <i>Fundamentals of Human Neuropsychology</i> . New York: W.H. Freeman and Company.	1	20
Field, A., Miles., & Field, Z. (2012). <i>Discovering Statistics Using R</i> . Sage Publications.	1	20
King, B.M., Rosopa, P.J., & Minium, E.W. (2011). <i>Statistical Reasoning in the Behavioral Sciences</i> (6th ed.) John Wiley & Sons, Inc.	5	20

Olmstead, M.C. & Kuhlmeier, V. (2015). <i>Comparative cognition</i> . Cambridge University Press.	1	20
Andrews, K. (2020). <i>How to study animal minds</i> . Cambridge: Cambridge University Press.	1	20
Cohen-Cole, J. (2014). <i>The open mind: Cold War politics and the sciences of human nature</i> . University of Chicago.	1	20
Eysenck, M.W. & Keane, M.T. (2007). Psychology Press.	1	20
Okasha, Samir (2004). <i>Philosophy of Science: A Very Short Introduction</i> . Oxford University Press.	5	20
Philip Kitcher and Gillian Barker (2014). <i>Philosophy of Science: A New Introduction</i> . Oxford University Press.	2	20
Godfrey-Smith, Peter (2003). <i>Theory and Reality: An Introduction to the Philosophy of Science</i> . Chicago University Press.	4	20
1.10. Additional literature		
1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies		
Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.		

GENERAL INFORMATION		
Course instructor	dr. sc. Igor Bajšanski, dr. sc. Marko Jurjako	
Name of the course	Interdisciplinary Modules in Cognitive Sciences 1	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	6
	Number of class hours (L+P+S)	26+0+13
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to familiarise students with selected topics in cognitive sciences from a disciplinary and interdisciplinary perspective. Interdisciplinary teaching will primarily take part in moderated discussion groups. In addition to pre-selected papers for each of the topics, students will be able to choose topics and papers for a certain number of discussion groups.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to synthesise results and insights from selected areas, - to consider and compare theories and models within selected areas, - to critically evaluate claims of empirical research from selected areas, - to analyse interdisciplinary links between disciplines and areas.		
1.4. Course content		
Examples of modules: Interdisciplinarity vs. multidisciplinary in cognitive sciences - Difference between interdisciplinarity and multidisciplinary - Cognitive sciences as an interdisciplinary science - The role of psychology in cognitive sciences Numerical cognition - Cognitive and neuronal mechanisms of understanding numbers - Cognitive and neuronal mechanisms of mental arithmetic Visual cognition - Visual selective attention - Spatial cognition - Object recognition - Visual working memory Judgement and reasoning - Deductive reasoning - Induction - Judgement: heuristics and biases		

- Dual-process theory of thought
- Individual differences in judgement and reasoning

Rationality

- Rational thinking
- The role of rationality in explaining behaviour and attributing mental attitudes
- Rationality and normative standards of inference

1.5. Manner of instruction(staviti X)	☒ lectures	☒ individual assignments
	☒ seminars and workshops	☐ multimedia and network
	☐ practicals	☐ laboratory
	☐ distance learning	☒ mentorship
	☐ fieldwork	☐ other _____

1.6. Student responsibilities

Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper		Experimental work	
Written exam	x	Oral exam		Essay	x	Research	
Project		Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students' work will be evaluated during classes. Learning outcomes will be evaluated during classes and assessed on the final exam. A detailed elaboration of monitoring and assessing students' work will be presented in the course syllabus.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Frodeman, R., Klein, J.T., & Pacheco, R.C.D.S. (Eds). (2017). <i>The Oxford handbook of interdisciplinarity</i> . Oxford University Press.	1	20
Dennett, D.C. (1981). True believers: the intentional strategy and why it works. In Chalmers (2002). <i>Philosophy of Mind: classical and contemporary readings</i> . Oxford University Press.	1	20

Samuels, R., Stich, S., & Bishop, M. (2002). Ending the rationality wars: how to make disputes about human rationality disappear. In R. Eliso (Ed.), <i>Common Sense, Reasoning, and Rationality</i> . Oxford University Press.	https://books.google.hr/books?hl=en&lr=&id=qsBehThigR0C&oi=fnd&pg=PA236&ots=qMsv4wHxGK&sig=QwdQ_hGpLLfWlynSP EI9hl-m_0M&redir_esc=y#v=onepage&q&f=false	20
Van Eck, N.J. & Waltman, L. (2014). CitNetExplorer: A new software tool for analyzing and visualizing citation networks. <i>Journal of Informetrics</i> , 8(4), 802-823. https://doi.org/10.1016/j.joi.2014.07.006	https://arxiv.org/pdf/1404.5322	20
Dehaene, S. (2009). Origins of mathematical intuitions: the case of arithmetic. <i>Annals of the New York Academy of Sciences</i> , 1156, 232-259. https://doi.org/10.1111/j.1749-6632.2009.04469.x	https://nyaspubs.onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2009.04469.x	20
Nieder, A., & Dehaene, S. (2009). Representation of number in the brain. <i>Annual Review of Neuroscience</i> , 32, 185-208. https://doi.org/10.1146/annurev.neuro.051508.135550	https://wiki.epfl.ch/hdstudio/documents/articles/nieder,dehaene(2009)arn.pdf	20
Cavanagh, P. (2011). Visual cognition. <i>Vision Research</i> , 51(13), 1538-1551. https://doi.org/10.1016/j.visres.2011.01.015	https://www.sciencedirect.com/science/article/pii/S0042698911000381	20
Franconeri, S.L., Alvarez, G.A., & Cavanagh, P. (2013). Flexible cognitive resources: competitive content maps for attention and memory. <i>Trends in Cognitive Sciences</i> , 17(3), 134-141. https://doi.org/10.1016/j.tics.2013.01.010	https://pmc.ncbi.nlm.nih.gov/articles/PMC5047276/pdf/nihms447790.pdf	20
Roelfsema, P.R., & Houtkamp, R. (2011). Incremental grouping of image elements in vision. <i>Attention, Perception & Psychophysics</i> , 73(8),	https://link.springer.com/artic	20

2542-2572. https://doi.org/10.3758/s13414-011-0200-0	le/10.3758/s13414-011-0200-0	
De Neys, W. & Glumicic, T. (2008). Conflict monitoring in dual process theories of reasoning. <i>Cognition</i> , 106, 1248-1299. https://doi.org/10.1016/j.cognition.2007.06.002	https://www.sciencedirect.com/science/article/pii/S0010027707001576?casa_token=tapmE4NvLbQAAA:4NgltXDggBU9Fc_oYsuuht8xWSp5F044CxZXsRZ6PtJpZEEq_o26brdY3e-zR8VDs3pEw1GTTgpK	20
Evans, J.St.B.T. & Stanovich, K.E. (2013). Dual-process theories of higher cognition advancing the debate. <i>Perspectives on Psychological Science</i> , 8(3), 223-241. https://doi.org/10.1177/1745691612460685	https://www.jstor.org/stable/pdf/44289870	20
Pennycook, G., Fugelsang, J.A., & Koehler, D.J. (2015). What makes us think? A three-stage dual-process model of analytic engagement. <i>Cognitive Psychology</i> , 80, 34-72. https://doi.org/10.1016/j.cogpsych.2015.05.001	https://dspace.mainprd01.lib.uwaterloo.ca/server/api/core/bitstreams/0158a7ce-4a88-421b-8ece-6523578a51d7/content	20
Stanovich, K.E. & West, R.F. (2000). Individual differences in reasoning: implications for the rationality debate. <i>Behavioral & Brain Sciences</i> , 23, 645-726. https://doi.org/10.1017/S0140525X0028343X	https://www.cambridge.org/core/journals/behavioral-and-brain-sciences/article/rationality-debate-from-the-	20

	<u>perspectiveof-cognitiveexperiential-selftheory/8ADA813BD57EFC15448DC8BBDF022564</u>	
Tversky, A. & Kahneman, D. (1974). Judgement under uncertainty: Heuristics and biases. <i>Science</i> , 185, 1124-1131. <u>https://doi.org/10.1126/science.185.4157.1124</u>	<u>https://www.jstor.org/stable/pdf/1738360.pdf</u>	20
1.10. Additional literature		
Cohen Kadosh, R., & Dowker, A. (2015). <i>The Oxford handbook of numerical cognition</i>. New York: Oxford University Press. Dehaene, S. (2011). <i>The number sense. 2nd ed.</i> New York: Oxford University Press. Coltheart, V. (2010). <i>Tutorials in visual cognition</i>. New York: Psychology Press. Ross, B.H., & Irwin, D. (2013). <i>Cognitive vision</i>. Amsterdam: Elsevier Science. Sun, R. (2008). <i>The Cambridge handbook of computational psychology</i>. Cambridge University Press. All of the above and other recent literature from the area covered by the course.		
1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies		
Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.		

GENERAL INFORMATION		
Course instructor	dr. sc. Petra Anić, dr. sc. Marko Tončić, dr. sc. Sandra Arbula	
Name of the course	Statistics	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	5
	Number of class hours (L+P+S)	18+18+18
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to enable students to work with empirical data and to plan and perform statistical analyses. To ensure that students can use the acquired skills and knowledge in future work, open-source software will be used - wherever possible - for all manipulations and analyses. Student assistants are participating in instruction in the seminars alongside the course instructors.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to use R to manipulate data files, - to use R to visualise data (1D, 2D and 3D), - to use R for modelling continuous and categorical outcome variables, - to apply and interpret basic linear models for continuous and categorical variables, - to apply the learned methods in independent research		
1.4. Course content		
Introduction to R: - basic data types in R, - importing data, - use of R 'packages' - data visualisation (package „lattice”). Modelling continuous data - linear models with 1 parameter, - linear models with 2 parameters, - use of categorical predictors, - interactions. Modelling of categorical data: - logistic regression. Modelling continuous data from research with 'pseudo-replications'		

- Repeated measures ANOVA							
1.5. Manner of instruction(staviti X)		☒ lectures ☒ seminars and workshops ☒ practicals ☐ distance learning ☐ fieldwork			☒ individual assignments ☐ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____		
1.6. Student responsibilities							
Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.							
1.7. Monitoring of student work							
Class attendance	x	Class participation	x	Seminar paper	x	Experimental work	
Written exam	x	Oral exam	x	Essay		Research	
Project		Continuous assessment		Report		Practical work	
Portfolio							
1.8. Assessment of learning outcomes in class and on the final exam							
Students' work and learning outcomes will be evaluated and assessed during classes and at the final exam. A detailed elaboration of monitoring and assessing students' work will be presented in the course syllabus.							
1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course							
Title		Number of copies		Number of students			
Judd, C.M., McClelland, G.H., & Ryan, C.S. (2017). <i>Data Analysis: A model comparison approach to regression, ANOVA, and beyond</i> . Routledge/Taylor & Francis Group.		1		20			
Maindonald, J. & Braun, J.W. (2010). <i>Data Analysis and Graphics Using R – an Example-Based Approach</i> . Cambridge University Press		1		20			
Miles, J. & Shevlin, M. (2001). <i>Applying Regression & Correlation</i> . SAGE Publications.		1		20			
1.10. Additional literature							
Agresti, A. (1996). <i>Categorical Data Analysis</i> . John Wiley & Sons, Inc.							

Crawley, M.J. (2007). *The R book*. John Wiley & Sons.

Field, A., Miles., & Field, Z. (2012). *Discovering Statistics Using R*. Sage Publications.

Pinheiro, J.C. & Bates, D.M. (2000). *Mixed-effects models in S and S-PLUS*. Springer.

All of the above and other recent literature from the area covered by the course.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić, dr. sc. Sandra Arbula, dr. sc. Asmir Gračanin	
Name of the course	Empirical Research Methods 1	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	5
	Number of class hours (L+P+S)	18+0+18
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to prepare and train students for (independent) research in cognitive sciences by familiarising them with 1. different theoretical approaches in the study of the mind and methods of model construction in cognitive sciences, and 2. experimental research methods.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- To analyse experimental and non-experimental designs and compare their methodological features - To interpret interactions in complex experimental designs - To devise experimental and non-experimental research designs following varied research questions - To select and devise the appropriate method while planning and conducting research - To describe and analyse the main theories of measurement - To evaluate discussions about validity and reliability - To describe and evaluate neuroscientific methods - To implement and adapt scales in cognitive sciences - To use psychophysiological measures in research in the cognitive sciences		
1.4. Course content		
Theories of measurement (reliability and validity), Experimental designs (reliability, validity, replicability in experimental designs in the cognitive sciences), neuroscientific methods (methods and conceptual questions in neuroscience), non-experimental designs		
1.5. Manner of instruction	☒ lectures ☒ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
1.6. Student responsibilities		

Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper	x	Experimental work	
Written exam	x	Oral exam	x	Essay		Research	
Project		Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students' work and learning outcomes will be evaluated and assessed during classes and at the final exam. A detailed elaboration of monitoring and assessing students' work will be presented in the course syllabus.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Bermúdez, J. (2016). <i>Cognitive science: An introduction to the science of the mind</i> (2nd ed.). Cambridge University Press.	1	20
Shaughnessy, J. J., Zechmeister, E. B. i Zechmeister, J. S. (2012). <i>Research methods in psychology</i> (9th ed.). McGraw-Hill.	5	20

1.10. Additional literature

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.

All of the above and other recent literature from the area covered by the course.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with

student representatives will take place at the end of the semester during the Teaching Committee meeting.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić	
Name of the course	Rotation Project 1	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	4
	Number of class hours (L+P+S)	2+0+16
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of this course is to recognise the importance of early stages of research projects. To this end, students will choose one of the offered topics and will, independently and with their supervisor, plan and design a study. For empirical projects, this includes planning statistical analyses, but does not include data collection. Thus, the rotation project has three functions: 1. to introduce students to different topics and areas of research of the lecturers involved in the study programme, 2. to introduce students to the research method of the selected project, and 3. to offer students the opportunity to apply their knowledge and skills from the 'Empirical Research Methods 1' and 'Statistics' courses as well as from the elective module 'Philosophy in cognitive sciences' in the 'Introduction to Disciplines and Work in Cognitive Sciences' course to a specific research project.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to select and adapt research designs according to a research question, - to explain and argue the choice of research design according to a research question, - to critically assess possible claims based on the planned study..		
1.4. Course content		
Open science; preregistrations; relationships between research designs, statistical analysis, and inferences/claims		
1.5. Manner of instruction	☒ lectures ☒ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship ☒ other _____Projectna nastava_____
1.6. Student responsibilities		

Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.

1.7. Monitoring of student work

Class attendance	x	Class participation		Seminar paper	x	Experimental work	
Written exam		Oral exam		Essay		Research	
Project	x	Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students' work and learning outcomes will be evaluated and assessed during classes and in the seminar paper (project report). A detailed elaboration of monitoring and assessment of students' work will be presented in the course syllabus.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Munafò, M.R., Nosek, B.A., Bishop, D.V., Button, K.S., Chambers, C.D., Du Sert, N.P., Simonsohn, U., Wagenmakers, E.-J., Ware, J.J., & Ionnidis, J.P. (2017). A manifesto for reproducible science. <i>Nature Human Behaviour</i> , 1, 1-9.	https://www.nature.com/articles/s41562-016-0021.pdf	20
Allen, C. & Mehler, D.M. (2019). Open science challenges, benefits and tips in early career and beyond. <i>PLoS Biology</i> , 17, e3000246.	https://journal.s.plos.org/plosbiology/article/file?id=10.1371/journal.pbio.3000246&type=printable	20

1.10. Additional literature

Recent literature covered by the course.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.

GENERAL INFORMATION		
Course instructor	dr. sc. Luca Malatesti, dr. sc. Asmir Gračanin, dr. sc. Igor Bajšanski, dr. sc. Marko Jurjako, dr. sc. Edward Legg	
Name of the course	Interdisciplinary Modules in Cognitive Sciences 2	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	9
	Number of class hours (L+P+S)	60+0+20
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to familiarise students with selected topics from cognitive sciences from a disciplinary and interdisciplinary perspective. Interdisciplinary teaching will primarily take place as part of moderated discussion groups. In addition to pre-selected papers for each of the topics, students will be able to select topics and papers for a certain number of discussion groups.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to synthesise results and insights from selected areas, - to evaluate and compare theories and models within selected areas, - to critically assess and compare theories and the way theories are developed between selected areas, - to critically assess claims of empirical studies from selected areas, - to analyse interdisciplinary links between disciplines and areas, - to synthesise arguments from philosophy in selected areas, - to compare discussions in selected areas in philosophy and within empirical disciplines and areas.		
1.4. Course content		
Modules in this course give examples of areas and themes of research in the cognitive sciences. Each module also investigates how common is interdisciplinarity in that area. Module examples Metacognition: The module investigates metacognition from the perspective of behavioral and neuroscientific research. Metacognition and consciousness: The module explores metacognition from a philosophical and comparative perspective. Theory of mind: The module explores theory of mind from an empirical and philosophical perspective. Perception and social cognition: The module explores how the perception of other people influences cognitive processes and behavior from the perspective of behavioral and neuroscientific research.		

Individual differences in cognition: the module explores the ways in which individual difference are researched in the cognitive sciences.

1.5. Manner of instruction(staviti X)	☒ lectures ☒ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☒ individual assignments ☐ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
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1.6. Student responsibilities

Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper		Experimental work	
Written exam	x	Oral exam		Essay	x	Research	
Project		Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students' work and learning outcomes will be evaluated and assessed during classes and at the final exam. A detailed elaboration of monitoring and assessment of students' work will be presented in the course syllabus.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Ackerman, R., & Thompson, V. A. (2017). Meta-reasoning: Monitoring and control of thinking and reasoning. <i>Trends in cognitive sciences</i> , 21(8), 607-617.	https://www.cell.com/trends/cognitive-sciences/abstract/S1364-6613(17)30105-5?elsca1=etoc&elsca3=1364-6613_201708_21_8_&elsca2=email&elsca4=Cell+Press	20
Nelson, T. O. (1999). Cognition versus metacognition. <i>The nature of cognition</i> , 625-641.	https://direct.mit.edu/books/edited-volume/4786/chapter-abstract/218736/Cognition-versus-Metacognition	20
Kornell, N. (2009). Metacognition in humans and animals. <i>Current</i>	https://journals.sagepub.com/doi/abs/10.1111/j.1467-	20

<i>Directions in Psychological Science</i> , 18(1), 11-15.	8721.2009.01597.x	
Levine, J. (2009). The Explanatory Gap. In Ansger Beckermann, Brian P. McLaughlin, and Sven Walter (Eds.) <i>The Oxford Handbook of Philosophy of Mind</i> . 1st ed. Oxford University Press	1	20
Ackerman, R. & Thompson, V.A. (2017). Meta-reasoning: Monitoring and control of thinking and reasoning. <i>Trends in Cognitive Sciences</i> , 21(8), 607-617.	https://www.psicologia.ulisboa.pt/wp-content/uploads/2020/03/Ackerman-Thompson-2017.pdf	20
Koriat, A. (2012). The self-consistency model of subjective confidence. <i>Psychological Review</i> 119, 80-113.	https://psycnet.apa.org/fulltext/2011-24234-001.html	20
Penn, D.C., & Povinelli, D.J. (2017). On the lack of evidence that non-human animals possess anything remotely resembling a 'theory of mind'. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 362(1480), 731-744.	https://royalsocietypublishing.org/rstb/article-abstract/362/1480/731/20927/On-the-lack-of-evidence-that-non-human-animals	20
Andrews, K. (2005). Chimpanzee theory of mind: Looking in all the wrong places? <i>Mind & Language</i> , 20(5), 532-536.	https://onlinelibrary.wiley.com/doi/abs/10.1111/j.0268-1064.2005.00298.x?casa_token=0d8_aRL2MhUAAAAA%3AmwQQbmJy0E6Ap_f6u63e07c3uIBr910XKcpdKSDJKIBJFfUihunkNkCF6p6MJKAVn1E9-Isqeh8w	20
Call, J., & Tomasello, M. (2008). Does the chimpanzee have a theory of mind? 30 years later. <i>Trends in Cognitive Sciences</i> , 12(5), 187-192.	https://www.cell.com/trends/cognitive-sciences/abstract/S1364-6613(08)00089-2	20
Ermer, E., Cosmides, L., & Tooby, J. (2008). Relative status regulates risky decision making about resources in men: Evidence for the co-evolution of motivation and cognition. <i>Evolution and Human Behavior</i> , 29(2), 106-118.	https://www.sciencedirect.com/science/article/pii/S109051380700116X?casa_token=kR4hjHMVaKgAAAAA:lyZFTVDw0epomBHami4IGIUX3_z4YKJzQ-	20

	uZ4kTWGOk54NLi n3ptpkkTG2AS6K wXrEBI9WcM	
Kozhenikov, M. (2007). Cognitive styles in the context of modern psychology: toward an integrated framework of cognitive styles. <i>Psychological Bulletin</i> , 133(3), 464.	https://psycnet.apa.org/fulltext/2007-06095-005.html	20
Bruinsma, J. & Crutzen, R. (2018). A longitudinal study on the stability for the need for cognition. <i>Personality and Individual Differences</i> , 127, 151-161.	https://www.sciencedirect.com/science/article/abs/pii/S0191886918300606	20
Churchland, P. (1988). Folk psychology and the explanation of human behaviour. <i>Aristotelian Society Supplementary Volume</i> , 62(1), 209-221. https://doi.org/10.1093/aristoteliansupp/62.1.209	https://www.jstor.org/stable/4106765?casa_token=w0tfEkluReMAAAAA:JhaavMvBiYDtXglcQnOuxVHUVaYYHwHLQnsJjJwdBIRF5axdlcRP1O4MD6N9PzHiSsqFw7ST2Rmu--UBdFwQuTFVaVPrgXDjkNSxqSBQJPNC0CgJnA	20
Goldman, A.I. (1989). Interpretation psychologized. <i>Mind & Language</i> , 4(3), 161-185. https://doi.org/10.1111/j.1468-0017.1989.tb00249.x	https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-0017.1989.tb00249.x	20
Cook, R., Bird, G., Catmur, C., Press, C., & Heyes, C. (2014) Mirror neurons: from origin to function. <i>Behavioural and Brain Sciences</i> , 37(2), 177-192. https://doi.org/10.1017/S0140525X13000903	https://www.cambridge.org/core/journals/behavioral-and-brain-sciences/article/abs/mirror-neurons-from-origin-to-function/A376CF4E7269CADFCD9D563A39ADEDCCQ	20
Friesen, C.K. & Kingstone, A. (1998). The eyes have it! Reflexive orienting is triggered by nonpredictive gaze. <i>Psychonomic Bulletin & Review</i> , 5, 490-495. https://doi.org/10.3758/BF03208827	https://link.springer.com/article/10.3758/bf03208827	20
Hood, B.M., Willen, J.D., & Driver, J. (1998). Adult's eyes trigger shifts of visual attention in human infants. <i>Psychological Science</i> , 9(2), 131-	https://journals.sagepub.com/doi/abs/10.1111/1467-9280.00024	20

134. https://doi.org/10.1111/1467-9280.00024		
Burge, T. (2018). Do infants and nonhuman animals attribute mental states? <i>Psychological Review</i> , 125(3), 409-434. https://doi.org/10.1037/rev0000091	https://psycnet.apa.org/fulltext/2018-20732-004.html	20
Butterfill, S.A. & Apperly, I.A. (2013). How to construct a minimal Theory of Mind. <i>Mind and Language</i> , 28(5), 606-637. https://doi.org/10.1111/mila.12036	https://onlinelibrary.wiley.com/doi/full/10.1111/mila.12036?casa_token=wnuR3Anu7mIAAAA%3Aa1XKNnS_3e5DkBpgVSTit-ooXDXd4UiNf5aA8vbyEGO_hb38FVQ8Y1dlbc103zySQS_XMs_G6rKw	20
Heyes, C. (2014). False belief in infancy: A fresh look. <i>Developmental science</i> , 17(5), 647-659. https://doi.org/10.1111/desc.12148	https://onlinelibrary.wiley.com/doi/full/10.1111/desc.12148?casa_token=oxgFEMt4pxYAAAAA%3AGujcCUg0QeI88dUndAgoydztm11xVQ3yj_OZ5bidLELktE3jIF7aFdTQRNLXGk4y-d84dMZQo4mG	20
1.10. Additional literature		
Dunlosky, J. & Metcalfe, J. (2009). <i>Metacognition</i>. Beverly Hills, CA: Sage. Dunlosky, J. & Tauber, S.K. (2014). Understanding people's metacognitive judgement: An isomechanism framework and its implications for applied and theoretical research. In T. Perfect & D.S. Lindsay (Eds.) <i>Handbook of Applied Memory</i> (pp. 444-464). Thousand Oaks, CA: Sage. Ansgar Beckermann, Brian P. McLaughlin, & Sven Walker, Eds. (2009). <i>The Oxford Handbook of Philosophy of Mind</i>, 1st ed. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199262618.001.0001 Catmur, C., Thompson, E.L., Bairaktari, O., Lind, F., & Bird, G. (2018). Sensorimotor training alters action understanding. <i>Cognition</i>, 171, 10-14. https://doi.org/10.1016/j.cognition.2017.10.024 Gallese, V., Fadiga, L., Fogassi, L., & Rizzolatti, G. (1996). Action recognition in the premotor cortex. <i>Brain</i>, 119, 593-609. Bugnyar, T., Reber, S., & Buckner, C. (2016). Ravens attribute visual access to unseen competitors. <i>Nature Communications</i>, 7, 10506. https://doi.org/10.1038/ncomms10506 Kovács, Á.M., Téglás, E., & Endress, A.D. (2010). The social sence: Susceptibility to others' beliefs in human infants and adults. <i>Science</i>, 330(6012), 1830-1834. https://doi.org/10.1126/science.1190792		

Krupenye, C., Kano, F., Hirata, S., Call, J., & Tomasello, M. (2016). Great apes anticipate that other individuals will act according to false beliefs. *Science*, 354, 110-114. <https://doi.org/10.1126/science.aaf8110>

Kulke, L., von Duhn, B., Schneider, D., & Rakoczy, H. (2018). Is implicit theory of mind a real and robust phenomenon? Results from a systematic replication study. *Psychological Science*, 29(6), 888-900. <https://doi.org/10.1177/095679617747090>

Southgate, V., Senju, A., & Csibra, G. (2007). Action anticipation through attribution of false belief by 2-year olds. *Psychological science*, 18(7), 587-592. <https://doi.org/10.1111/j.1467-9280.2007.01944>

All of the above and other recent literature from the area covered by the course.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić	
Name of the course	Ethics	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	16	
ECTS credits and manner of instruction	ECTS credits	6
	Number of class hours (L+P+S)	15+0+30
COURSE DESCRIPTION		
1.1. Course objectives		
The course has two related aims: 1. to familiarise students with ethical questions in cognitive sciences research from a philosophical perspective, and 2. to introduce students to contemporary approaches and problems in research from an ethical view such that during the course students and lecturers can discuss situations and components that the students are likely to encounter during their future research work. As part of the course, the student develop a project on a selected topic that deals with some aspect of ethics in research. The projects represent a tangible outcome which is further developed in cooperation with the students for the event ConScience and for real-life implementation. The outcome of the project is usually licensed under a CC-BY-NC license.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to critically assess the role of ethics for cognitive sciences, - to analyse ethical issues related to different studies, - to assess the ways in which ethical issues in empirical research can be approached during applications for ethical approval, - to discuss ethical issues arising from the use of empirical data and results, - to analyse ethical questions related to the nature of work and professional development in academia.		
1.4. Course content		
Introduction to ethics in philosophy; ethics in cognitive sciences research; ethical issues in working with participants (people, animals); ethical issues in research methods and data analysis; data management and sharing; General Data Protection Regulation (GDPR); dissemination of results; use of results of empirical research to create public policy; use and misuse of empirical research results: historical and contemporary perspectives; ethical issues in the scientific community, visibility of minority researchers and their work; diversity in the research community, scientific colonialism.		
1.5. Manner of instruction(staviti X)	☒ lectures ☒ seminars and workshops ☐ practicals	☒ individual assignments ☐ multimedia and network ☐ laboratory

		☐ distance learning ☐ fieldwork		☒ mentorship ☐ other _____			
1.6. Student responsibilities							
Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.							
1.7. Monitoring of student work							
Class attendance	x	Class participation		Seminar paper	x	Experimental work	
Written exam		Oral exam		Essay		Research	
Project	x	Continuous assessment		Report		Practical work	
Portfolio							
1.8. Assessment of learning outcomes in class and on the final exam							
Students' work and learning outcomes will be evaluated and assessed through a project and seminar paper (project report). A detailed elaboration of monitoring and assessment of students' work will be presented in the course syllabus.							
1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course							
Title		Number of copies		Number of students			
Rosnow, R.L. & Rosenthal (2013). <i>Beginning Behavioral Research: A Conceptual Primer</i> . Harlow: Prentice Hall.		1		20			
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		20			
Birhane, A. & Guest, O. (2020). Towards decolonising computational sciences. <i>aXiv:1009.14258</i> .		https://arxiv.org/abs/2009.14258		20			
Lee, D.N. (2020). Diversity and inclusion activism in animal behaviour and the ABS: a historical view from the USA. <i>Animal Behaviour</i> , 164, 273-280. https://doi.org/10.1016/j.anbehav.2020.03.019		https://www.sciencedirect.com/science/article/abs/pii/S003347220300890		20			

Greene, T., Schmueli, G., Ray, S., & Fell, J. (2019). Adjusting to the GDPR: The impact on data scientists and behavioral researchers. <i>Big data</i> , 7(3), 140-162. https://doi.org/10.1089/big.2018.0176	https://journals.sagepub.com/doi/abs/10.1089/big.2018.0176	20
Norton, B.J. (1978). Karl Pearson and Statistics: The origins of scientific innovation. <i>Social Studies of Science</i> , 8(1), 3-34.	https://journals.sagepub.com/doi/abs/10.1177/030631277800800101	20
Smaldino, P.E. & McElreath, R. (2016). The natural selection of bad science. <i>Royal Society Open Science</i> , 3(9), 160384. https://doi.org/10.1098/rsos.160384	https://royalsocietypublishing.org/rsos/article/3/9/160384/56494	20
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. <i>Computational Brain & Behavior</i> , 2, 271-276. https://doi.org/10.1007/s42113-019-00066-7 .	https://link.springer.com/article/10.1007/s42113-019-00066-7	20
Chambers, C.D., Dienes, Z., McIntosh, R.D., Rotshtein, P., & Willmes, K. (2015). Registered reports: realigning incentives in scientific publishing. <i>Cortex</i> , 66, A1-A2. https://doi.org/10.1016/j.cortex.2015.03.022	https://orca.cardiff.ac.uk/id/eprint/73305/1/Chambers_etal_2015_Cortex_GreenOA.pdf	20
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. <i>F1000Research</i> , 5, 632. https://doi.org/10.12688/f1000research.8460.3	https://pmc.ncbi.nlm.nih.gov/articles/PMC4837983/	20

Eren, E. (2020). Never the right time: maternity planning alongside a science career in academia. <i>Journal of Gender Studies</i>, 1-12. https://doi.org/10.1080/09589236.2020.1858765	https://www.tandfonline.com/doi/abs/10.1080/09589236.2020.1858765	20
1.10. Additional literature		
Siebert, J.E. (2004). Empirical research on research ethics. <i>Ethics & Behavior</i>, 14(4), 397-412. https://doi.org/10.1207/s15327019eb1404_9 Mietola, R., Miettinen, S., & Vehmas, S. (2017). Voiceless subjects? Research ethics and persons with profound intellectual disabilities. <i>International Journal of Social Research Methodology</i>, 20(3), 263-274. Jaffe, K., Correa, J.C., & Tang-Martinez, Z. (2020). Ethology and animal behaviour in Latin America. <i>Animal Behaviour</i>, 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. <i>Ethics & Behavior</i>, 7(2), 149-161. Delzell, D.A.P. & Poliak, C.D. (2013). Karl Pearson and Eugenics: Personal Opinions and Scientific Rigor. <i>Science and Engineering Ethics</i>, 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. <i>Royal Society Open Science</i>, 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. <i>Perspectives on Psychological Science</i>, 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. <i>Social Forces</i>, 96(2), 529-560. https://doi.org/10.1093/sf/sox052		
All of the above and other recent literature from the area covered by the course.		
1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies		
Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.		

GENERAL INFORMATION		
Course instructor	dr. sc. Edward Legg, dr. sc. Sandra Arbula	
Name of the course	Empirical Research Methods 2	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	7
	Number of class hours (L+P+S)	30+0+30
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to prepare and train students for (independent) research in cognitive sciences by 1. introducing them to the diversity of methodological approaches and methods in cognitive sciences and 2. integrating steps in empirical research through specialized workshops. Instruction is aided by student assistants (demonstrators).		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to design cognitive experiments with reaction times as a dependent variable, - to analyse and interpret results of experiments with reaction times as a dependent variable - to program cognitive experiments on a computer using programs like PsychoPy or OpenSesame - to design and program online experiments - to critically evaluate the use of online testing in the cognitive sciences		
1.4. Course content		
Mental chronometry (Donders' subtractive method, Sternberg's additive factors method, Methodological aspects of reaction time measurement), Programming cognitive experiments on a computer, e.g.: PsychoPy and OpenSesame, Online testing in cognitive sciences, Open Science tools for planning and designing empirical research As part of the course, the students use a digital platform that implements the programming tasks of the course.		
1.5. Manner of instruction(staviti X)	☒ lectures ☒ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
1.6. Student responsibilities		

Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper	x	Experimental work	
Written exam		Oral exam		Essay		Research	
Project	x	Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students' work and learning outcomes will be evaluated and assessed during classes and through other stated activities. A detailed elaboration of monitoring and assessing students' work will be presented in the course syllabus.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Bermúdez, J. (2016). <i>Cognitive science: An introduction to the science of the mind</i> (2nd ed.). Cambridge University Press.	1	20
Shaughnessy, J. J., Zechmeister, E. B. i Zechmeister, J. S. (2012). <i>Research methods in psychology</i> (9th ed.). McGraw-Hill.	5	20
Farrell, S. i Lewandowsky, S. (2018). <i>Computational modeling of cognition and behavior</i> . Cambridge University Press.	1	20
Kline, R. B. (2008). <i>Becoming a behavioral science researcher: A Guide to producing research that matters</i> . The Guilford Press.	1	20
Stewart, N., Chadler, J., & Paolacci, G. (2017). Crowdsourcing samples in cognitive science. <i>Trends in cognitive sciences</i> , 21(10), 736-748. https://doi.org/10.1016/j.tics.2017.06.007	https://www.cell.com/trends/cognitive-sciences/fulltext/S1364-6613(17)30131-6	20

1.10. Additional literature

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>

All of the above and other recent literature from the area covered by the course.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić	
Name of the course	Rotation Project 2	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	1	
ECTS credits and manner of instruction	ECTS credits	5
	Number of class hours (L+P+S)	3+0+19
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of this course is to recognise the importance of early stages of research projects. To this end, students will choose one of the offered topics and plan and will, independently and with their supervisor, design a study. For empirical projects, this includes planning statistical analyses, but does not include data collection. Thus, the rotation project has three functions: 1. to introduce students to different topics and areas of research of the lecturers involved in the study programme, 2. to introduce students to the research method of the selected project, and 3. to offer students the opportunity to apply of knowledge and skills from the 'Empirical Research Methods 2' and 'Ethics' courses as well as from the elective module 'Philosophy in cognitive sciences' in the 'Introduction to the Disciplines and Work in Cognitive Sciences' course to a specific research project.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to select and adapt the research design based on a research question, - to explain and argue the choice of research design based on a research question, - to critically evaluate possible claims based on a planned study, - to critically evaluate possible ways to increase the reproducibility and replicability of research (if relevant), - to plan and write a data management plan for a selected research question, - to critically evaluate ethical questions related to a selected research question, - to analyse possible ways to approach the above-mentioned ethical questions in practice.		
1.4. Course content		
Open Science; Data Management; replicability; ethical questions in cognitive science research		
1.5. Manner of instruction(staviti X)	☒ lectures ☒ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship

				☒ other _____ Projectna nastava _____	
1.6. Student responsibilities					
Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.					
1.7. Monitoring of student work					
Class attendance	x	Class participation		Seminar paper	x
Written exam		Oral exam		Essay	
Project	x	Continuous assessment		Report	
Portfolio					
1.8. Assessment of learning outcomes in class and on the final exam					
Students' work and learning outcomes will be evaluated and assessed during classes and through the seminar paper (project report). A detailed elaboration of monitoring and assessing students' work will be presented in the course syllabus.					
1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course					
Title		Number of copies		Number of students	
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		https://www.nature.com/articles/sdata201618		20	
Gewin, V. (2016). Data sharing: An open mind on open data. <i>Nature</i> , 529(7584), 117-119.		https://www.nature.com/articles/nj7584-117a		20	
Stewart, N., Chandler, J., & Paolacci, G. (2017). Crowdsourcing samples in cognitive science. <i>Trends in cognitive sciences</i> , 21(10), 736-748.		https://www.cell.com/trends/cognitive-sciences/fulltext/S1364-6613(17)30131-6		20	
Crüwell, S., van Doorn, J., Etz, A., Makel, M. C., Moshontz, H., Niebaum, J. C., ... & Schulte-Mecklenbeck, M. (2019). Seven		https://econtent.hogrefe.com/doi/full/10.102		20	

easy steps to open science. <i>Zeitschrift für Psychologie</i> .	<u>7/2151-</u> <u>2604/a000387</u>	
1.10. Additional literature		
Truong, N. B., Sun, K., Lee, G. M., & Guo, Y. (2019). Gdpr-compliant personal data management: A blockchain-based solution. <i>IEEE Transactions on Information Forensics and Security</i>, 15, 1746-1761. McLeod, J., & O'Connor, K. (2020). Ethics, archives and data sharing in qualitative research. <i>Educational Philosophy and Theory</i>, 53(5), 523-535. Gurevitch, J., Koricheva, J., Nakagawa, S., & Stewart, G. (2018). Meta-analysis and the science of research synthesis. <i>Nature</i>, 555(7695), 175-182. All of the above and other recent literature from the area covered by the course.		
1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies		
Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content. Additionally, an informal discussion with students will take place at the end of the course and a formal discussion with student representatives will take place at the end of the semester during the Teaching Committee meeting.		

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić, dr. sc. Sandra Arbula	
Name of the course	Preparation of Masters Thesis 1	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	2	
ECTS credits and manner of instruction	ECTS credits	20
	Number of class hours (L+P+S)	0+0+12
COURSE DESCRIPTION		
1.1. Course objectives		
The objective of the course is to teach the planning and execution of independent research and the presentation of the conducted work in a poster* at the event CogSci Masters Posters. * posters are published on the website of the program under CC-BY-NC licenses Note: If the student conducts part of their thesis research at a different institution by doing an internship, that internship is recognized within this course (to the extent and hours it was done – to the equivalent of 1,5 ECTS credits for two weeks of internship).		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences,'		
1.3. Expected learning outcomes		
- Select a research question for independent research - For empirical projects: design the research according to the research question - For theoretical projects: select the appropriate research methods - Critically assess the possibilities of inference based on the planned thesis project - Conceptualize and develop the presentation of the conducted research for poster dissemination		
1.4. Course content		
Initial workshop about the planning of thesis. Planning and development of thesis. Formal meetings and informal work with supervisor. Poster presentation of the thesis project. The initial workshop, if needed, can be conducted in a hybrid fashion to allow all students to participate.		
1.5. Manner of instruction	☐ lectures ☐ seminars and workshops ☐ practicals ☐ distance learning ☒ fieldwork	☐ individual assignments ☐ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić, dr. sc Edward Legg	
Name of the course	Journal Club 1	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	2	
ECTS credits and manner of instruction	ECTS credits	2
	Number of class hours (L+P+S)	0+0+20
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to introduce students to the style of seminars known as 'journal clubs' with the primary purpose of presenting and discussing current literature. Note 1: This course has a second part that is offered in the fourth semester (Journal Club 2). Both courses have the same objective and expected learning outcomes, while their content and literature will depend on the studies and topics selected by the students. Together, these two courses allow a continuous, regular and active dealing with contemporary research in cognitive sciences. Note 2: The "Journal club 1 and 2" courses are conceptualised to fit the mobility period offered to students in their third or fourth semester. They are compatible with journal clubs organised by research groups, Departmental or other seminars at potential host institutions. To ensure the maximum flexibility for students, a special committee will work out an individual plan with each student taking part in the mobility programme. The initial workshop can be conducted in a hybrid fashion to allow all students to participate.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to present literature (e.g., an article) in a concise form to an audience of scientists with different experiences, - to critically evaluate and discuss methods, claims and possible impact of research.		
1.4. Course content		
Short presentations of articles in cognitive sciences selected by students with subsequent discussion.		
1.5. Manner of instruction	☐ lectures ☒ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☒ individual assignments ☐ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
1.6. Student responsibilities		

Students are required to participate in journal clubs. During the second year of study, each student is required to select and present a topic in one journal club. If for some reason (e.g., justified absence of the student) it is not possible to give the presentation, the lecturer and student will agree on a different form of student contribution in order for the student to receive a positive grade. As it is not possible for every student to give the presentation in the same semester, lecturers will adjust the programme of the 'Journal Club 1' and 'Journal Club 2' courses.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project		Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students will obtain a positive grade for the course if they have presented (or made an equivalent contribution in situations where presentation was not possible) in one journal club, or if their presentation is planned during the course "Journal Club 2", and if they actively participate in discussions.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Articles and texts selected by students.	Cannot be predicted.	20

1.10. Additional literature

Literature that – according to the selection of the research article by the student – can aid the student who is presenting the article as well as the students in the audience in better understanding the selected research article.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić	
Name of the course	Science Communication 1	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	2	
ECTS credits and manner of instruction	ECTS credits	4
	Number of class hours (L+P+S)	3+0+14
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to encourage and train students to plan and develop different ways of communicating science. To this end, students will plan a science communication project related to their Masters thesis. Note : The course is conceptualised to fit the mobility period offered to students in their third or fourth semester. It is compatible with potential projects or courses in science communication at potential host institutions. There is also the possibility of hybrid mentoring and teaching. To ensure the maximum flexibility for students, a special committee will work out an individual plan with each student taking part in the mobility programme.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences',		
1.3. Expected learning outcomes		
- to conceptualise different science communication ideas and adapt them to the topic of a research project, - to create a plan for a science communication project according to a selected topic, - to critically evaluate the benefits and possible problems in science communication in general and for specific projects.		
1.4. Course content		
Science communication; Citizen science (Community science); science communication tools; social media		
1.5. Manner of instruction	☒ lectures ☒ seminars and workshops ☒ practicals ☒ distance learning ☒ fieldwork	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship ☒ other ____Projectna nastava_____
1.6. Student responsibilities		
Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.		

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić	
Name of the course	Professional Development	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	2	
ECTS credits and manner of instruction	ECTS credits	
	Number of class hours (L+P+S)	0+0+12
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to familiarise students with different professional development tools and assist them in developing tools that may be useful for their future careers. Note: The course is conceptualised to fit the mobility period offered to students in their third or fourth semester. It is compatible with potential professional development courses or workshops at potential host institutions. There is also the possibility of hybrid mentoring and teaching. To ensure the maximum flexibility for students, a special committee will work out an individual plan with each student taking part in the mobility programme.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to write a CV and adapt it for different situations (applying for a doctorate, applying for other jobs within the academic environment, applying for jobs in industry), - effectively use social networks and other online platforms for professional development and professional visibility. - effectively plan the next steps in one's own professional work. - prepare questions for people working in the field they are interested in.		
1.4. Course content		
Career planning, applying to open calls, contacting potential supervisors or employers without an open call, writing a CV, social networks and online platforms, interviews		
1.5. Manner of instruction	☒ lectures ☒ seminars and workshops ☒ practicals ☒ distance learning ☐ fieldwork	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
1.6. Student responsibilities		
Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.		

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić, dr. sc. Sandra Arbula	
Name of the course	Preparation of Masters Thesis 2	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	2	
ECTS credits and manner of instruction	ECTS credits	20
	Number of class hours (L+P+S)	0+0+8
COURSE DESCRIPTION		
1.1. Course objectives		
The objective of the course is conducting independent research and the oral presentation of the thesis at the student symposium at the event <i>Rijeka Cognitive Sciences Symposium</i>. Students may organize their thesis defenses as part of the above mentioned symposium. Note: If the student conducts part of their thesis research at a different institution by doing an internship, that internship is recognized within this course (to the extent and hours it was done – to the equivalent of 1,5 ECTS credits for two weeks of internship).		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences,'		
1.3. Expected learning outcomes		
- for empirical projects, conduct data collection - for empirical projects, analyze and interpreted the collected data - for theoretical projects, the implementation of planned methods - put the conducted research into writing - design and execute the oral presentation of conducted work		
1.4. Course content		
Preparing the thesis. Formal meetings and informal work with the supervisors. Oral presentation of the thesis.		
1.5. Manner of instruction	☐ lectures ☐ seminars and workshops ☐ practicals ☐ distance learning ☒ fieldwork	☐ individual assignments ☐ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
1.6. Student responsibilities		

Use of co-working spaces, research work with supervisor, oral presentation of thesis as part of the student symposium at the event Rijeka Cognitive Sciences Symposium.

When possible, the students may organize their thesis defense as part of the above mentioned symposium.

1.7. Monitoring of student work

Class attendance		Class participation		Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project		Continuous assessment		Report		Practical work	
Portfolio		Obrana diplomskog rada	x				

1.8. Assessment of learning outcomes in class and on the final exam

The work of the student and the learning outcomes will be evaluated during thesis defense.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Literature depends on the topic of research.	Cannot be predicted.	20

1.10. Additional literature

Literature depends on the topic of research.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Students regularly meet with supervisor, co-supervisor, and adviser.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić, dr. sc. Edward Legg	
Name of the course	Journal Club 2	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	2	
ECTS credits and manner of instruction	ECTS credits	2
	Number of class hours (L+P+S)	0+0+16
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to introduce students to the style of seminars known as 'journal club', with the primary purpose of presenting and discussing current literature. Note 1: This course has a first part that is offered in the third semester (Journal Club 1). It is not necessary to have completed the "Journal Club 1" course to enrol in this course (see note about mobility). Both courses have the same objective and expected learning outcomes, while their content and literature will depend on the studies and topics selected by the students. Together, these two courses allow a continuous, regular and active dealing with contemporary research in cognitive sciences. Note 2: The "Journal club 1 and 2" courses are conceptualised to fit the mobility period offered to students in their third or fourth semester. They are compatible with journal clubs organised by research groups, Departmental or other seminars at potential host institutions. To ensure the maximum flexibility for students, a special committee will work out an individual plan with each student taking part in the mobility programme.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to present literature (e.g., an article) in a concise form to an audience of scientists with different experiences, - to critically evaluate and discuss methods, claims and possible impact of research.		
1.4. Course content		
Short presentations of articles in cognitive sciences selected by students with subsequent discussion.		
1.5. Manner of instruction	☐ lectures ☒ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☒ individual assignments ☐ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
1.6. Student responsibilities		

Students are required to participate in journal clubs. During the second year of study, each student is required to select and present a topic in one journal club. If for some reason (e.g., justified absence of the student) it is not possible to give the presentation, the lecturer and student will agree on a different form of student contribution in order for the student to obtain a positive grade. As it is not possible for each student to give the presentation in the same semester, lecturers will adjust the programme of the courses 'Journal Club 1' and 'Journal Club 2'.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project		Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students will obtain a positive grade for the course if they present (or make an equivalent contribution in situations where presentation was not possible) in one journal club, or if they did a presentation during the course 'Journal Club 1', and if they actively participate in discussions.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Articles and texts selected by students	Cannot be predicted	20

1.10. Additional literature

Literature that – according to the selection of the research article by the student – can aid the student who is presenting the article as well as the students in the audience in better understanding the selected research article.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Evaluation will be carried out at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content.

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić	
Name of the course	Science Communication 2	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Compulsory	
Year of study	2	
ECTS credits and manner of instruction	ECTS credits	4
	Number of class hours (L+P+S)	3+0+14
COURSE DESCRIPTION		
1.1. Course objectives		
The aim of the course is to carry out a science communication project related to the Masters thesis. Note: The course is conceptualised to fit the mobility period offered to students in their third or fourth semester. It is compatible with potential projects or courses in science communication at potential host institutions. There is also the possibility of hybrid mentoring and teaching. To ensure the maximum flexibility for students, a special committee will work out an individual plan with each student taking part in the mobility programme.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'		
1.3. Expected learning outcomes		
- to adapt the content and manner of presentation to a target audience, - to make a presentation and materials in line with the target audience		
1.4. Course content		
Oral and written presentations, digital presentation tools, social media, multimedia, self-assessment of presentation and project, project management		
1.5. Manner of instruction	☒ lectures ☒ seminars and workshops ☒ practicals ☒ distance learning ☒ fieldwork	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship ☐ other _____
1.6. Student responsibilities		
To regularly attend classes and actively participate in seminars. To carry out a science communication project planned during the course 'Science Communication 1'. Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.		
1.7. Monitoring of student work		

Class attendance	x	Class participation	x	Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project	x	Continuous assessment		Report		Practical work	
Portfolio							
1.8. Assessment of learning outcomes in class and on the final exam							
Students' work and learning outcomes will be evaluated and assessed during, through a realized project, A detailed elaboration of monitoring and assessing students' work will be presented in the course syllabus.							
1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course							
Title		Number of copies		Number of students			
Depends on the topic of thesis, considering this course follows the research area of the thesis		Cannot predict		1 student, because each student is working on their topic of choice			
1.10. Additional literature							
-							
1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies							
Evaluation will be carried out continuously during classes and at the end of the course using an anonymous questionnaire examining the course/teaching/ teaching materials/interaction with students/adoption of content.							

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GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić, dr. sc. Zdenka Brzović, dr. sc. Edward Legg, dr. sc. Sandra Arbula	
Name of the course	Elective Modules in Cognitive Sciences	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Izborni	
Year of study	1, 2	
ECTS credits and manner of instruction	ECTS credits	3
	Number of class hours (L+P+S)	12+0+12
COURSE DESCRIPTION		
1.1. Course objectives		
The goal of the course is to introduce students to various fields of work and study within the cognitive sciences from a disciplinary, multidisciplinary and interdisciplinary perspective.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme; completed course 'Introduction to the Disciplines and Work in Cognitive Sciences'.		
1.3. Expected learning outcomes		
<u>Elective learning outcomes (depending on students' choice):</u> - to describe and analyze current topics in metascience from various perspectives - to critically evaluate the work of metascientists - to describe and compare different approaches to modelling cognitive processes, - to analyze cognitive processes as neural mechanisms - to independently study recent literature in cognitive and neural modelling - to evaluate the use of artificial intelligence in the research of the mind and cognition, - to identify and analyze barriers and challenges in artificial intelligence, - to independently study recent literature in artificial intelligence - to identify the main topics of discussion within the research field of the development of cognition - to evaluate the use and challenges of different empirical approaches in the development of cognition - to critically evaluate the results of empirical research about the development of cognition and the relationship of such research with developmental theories - to discuss selected topics within developmental psychology - to describe and analyze contemporary topics and recent research in evolution of cognition - to critically evaluate methods and conclusions of recent research in evolution of cognition - to write on the same topic in different ways, depending on where the text is expected to be published, - to structure a scientific text according to where the text is expected to be published, - to recognise how to rearrange the text when a change in the main structure is needed, e.g., because there is a change in the place where the paper is sent for review,		

- to analyse potential challenges and benefits of working with multiple co-authors,
- to integrate the above-mentioned challenges and benefits in decision-making on co-authorship and organisation of work,
- to analyse and evaluate others' comments on the text, and how and when to integrate them into new versions,
- to analyse and evaluate the usefulness of own comments on others' writing, and how to structure own comments,
- to formulate constructive comments and feedback in the role of a reviewer.
- to analyse basic terminology and theoretical assumptions in cognitive linguistics,
- to interpret linguistic phenomena (of English but also other languages familiar to the students),
- to interpret differences between languages regarding terminology and principles of cognitive linguistics,
- to compare differences between languages with universally operational elements and processes of the human mind and human language competencies,
- to summarise and evaluate research in cognitive linguistics,
- to discuss approaches and projects in cognitive linguistics.
- to describe and analyse current topics and recent studies in social cognition research,
- to critically evaluate methods and claims of social cognition studies.
- to 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,
- to explain the historical context and causes of fundamental personality theory development,
- to evaluate the basics of biological, psychodynamic, neo-analytic and cognitive approaches to personality,
- to evaluate dimensional and factor-analytic approaches to personality,
- to assess the compatibility of different personality theories,
- to 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,
- to critically analyse and discuss scientific and popular-scientific literature on individual differences.
- to analyse the challenges and benefits of Open Science approaches and tools,
- to apply and adapt various Open Science tools to own research,
- to discuss benefits and suitability of various tools for different research,
- to discuss and make informed decisions about using Open Science approaches and tools in own work.
- to explain recent discussions within contemporary philosophy of science,
- to defend different philosophical positions within discussions on contemporary philosophy of science.
- to describe the development of the debate on the relationship between the mind and the body from René Descartes to contemporary functionalism,
- to explain the physicalist/materialist foundations of contemporary approaches to research of the mind,
- to distinguish types of physicalism,
- to analyse the most important arguments against physicalism, especially those based on the hard problem of consciousness,

- to analyse the role of thought experiments in science,
- to evaluate and use deductive arguments in research on the mind.
- to explain the discrepancies between folk psychology and scientific concepts from psychology and neuroscience,
- to 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),
- to apply the interface problem to a practical case study,
- to discuss the interface problem.

1.4. Course content

Recent topics from the modules and their extensions:

Examples of modules offered to students:

Current Issues in Empirical Cognitive Sciences / Cognitive Sciences Book Club / Cognitive and neural modelling / Artificial intelligence and cognition / Developing Minds / Evolution of Cognition: Brain and Behaviour / Scientific Writing and Reviewing (2nd year of study) / Cognitive linguistics / Social Cognition: What do we know about others' minds? / Introduction to Individual Differences / Open Science and Its Tools / Philosophy of Science / Methods of cognitive neuroscience in practice (2nd year of study) / Foundations and Current Topics in Philosophy of Mind / Introduction to Philosophy of Psychology and Neuroscience

1.5. Manner of instruction	☒ lectures	☒ individual assignments
	☒ seminars and workshops	☒ multimedia and network
	☐ practicals	☐ laboratory
	☒ distance learning	☒ mentorship
	☐ fieldwork	☐ other _____

1.6. Student responsibilities

Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.

1.7. Monitoring of student work

Class attendance	x	Class participation	x	Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project	x	Continuous assessment		Report		Practical work	
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

Students' work and learning outcomes will be evaluated and assessed during classes. A detailed elaboration of monitoring assessing students' work will be presented in the course syllabus.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
Recent literature that covers the topic of the module.	Cannot be predicted.	Depends on the number of students per module.
1.10. Additional literature		
Recent literature that adds to the topic of the module.		
1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies		
Continuous monitoring of students' progress by the lecturer, anonymous survey evaluating the course and joint discussion at the end of the course.		

GENERAL INFORMATION		
Course instructor	dr sc. Ljerka Ostojić, dr. sc. Edward Legg, dr. sc. Sandra Arbula, dr. sc. Petra Anić, dr. sc. Marko Tončić	
Name of the course	Academic Development	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Elective	
Year of study	1, 2	
ECTS credits and manner of instruction	ECTS credits	2
	Number of class hours (L+P+S)	0+10+5
COURSE DESCRIPTION		
1.1. Course objectives		
The goal of the course is to provide support to students in their academic development by introducing extra content that covers writing, reading, speaking, language competencies, advanced statistical methods and support in programming of experiments, as required by individual students.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme.		
1.3. Expected learning outcomes		
Prema potpori koja je studentu potrebna: - to independently read technical and scientific literature, - to listen to lectures and talks and take notes, - to present their own arguments, - to prepare and orally present technical and scientific topics, - to plan and write a structured text, - to summarise and critically evaluate written academic texts, - to paraphrase texts, - to use academic discourse, - to reflect on their own skills, recognise areas for improvements and identify useful resources. - to use advanced statistical methods that are relevant to their field of study - to assess the adequacy of various statistical methods that are relevant to their field of study - to program cognitive experiments on the computer using PsychoPy or OpenSesame		
1.4. Course content		
The content follows the needs of the individual student, concerning writing, reading, speaking, language competencies, statistical methods and programming experiments.		
1.5. Manner of instruction	☐ lectures ☒ seminars and workshops ☒ practicals ☐ distance learning	☒ individual assignments ☒ multimedia and network ☐ laboratory ☒ mentorship

		☒ fieldwork		☐ other _____	
1.6. Student responsibilities					
Students are required to attend class, actively participate in class, and observe academic integrity and fulfil all elements of continuous evaluation and grading of their work.					
1.7. Monitoring of student work					
Class attendance	x	Class participation	x	Seminar paper	Experimental work
Written exam		Oral exam		Essay	Research
Project		Continuous assessment		Report	Practical work
Portfolio					
1.8. Assessment of learning outcomes in class and on the final exam					
The learning outcomes will be formatively assessed during the course.					
1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course					
Title		Number of copies		Number of students	
Moore, J. (2017) <i>Oxford Academic Vocabulary Practice: Upper-intermediate</i> . Oxford University Press.		1		20	
Swales, J. M., Feak, C. (2012) <i>Academic Writing for Graduate Students: Essential Tasks and Skills</i> . Michigan: University of Michigan.		1		20	
McCarthy, P., Hatcher, C. (2002) <i>Presentation Skills: Essential Guide for Students</i> . New Delhi: Sage Publications		1		20	
1.10. Additional literature					
-					
1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies					
Continuous monitoring of students' progress by the lecturer, anonymous survey evaluating the course and joint discussion at the end of the course.					

GENERAL INFORMATION		
Course instructor	dr. sc. Ljerka Ostojić, dr. sc. Edward Legg	
Name of the course	Internship	
Study programme	Graduate study: Cognitive Sciences: Cognition and the Mind	
Status of the course	Elective	
Year of study	1, 2	
ECTS credits and manner of instruction	ECTS credits	3 ili 6
	Number of class hours (L+P+S)	0+0+0
COURSE DESCRIPTION		
1.1. Course objectives		
The objective of the course is to allow students to take internships in the area of cognitive sciences. The internships are conducted under the supervision of the host institution. Internships can be done in academic or non-academic environments, in scientific and applied areas of the cognitive sciences. Scientific internships can be done at the Faculty of Philosophy and Social Sciences, for example by working on a research project conducted by a lecturer or extending a project that was done as part of <i>Rotation Project 1</i> or <i>2</i>. It is recommended to take the internship during the second year of study. The calculation of ECTS credits is 1,5 ECTS per 2 weeks of internship.		
1.2. Course enrolment requirements		
Enrolment in the Masters programme.		
1.3. Expected learning outcomes		
- plan and conduct the work of a cognitive scientist in an academic or non-academic professional environment -		
1.4. Course content		
The content of the internship is defined according to the plan defined in cooperation with the host institution.		
1.5. Manner of instruction	☐ lectures ☐ seminars and workshops ☐ practicals ☐ distance learning ☐ fieldwork	☐ individual assignments ☐ multimedia and network ☐ laboratory ☐ mentorship ☒ other _____ Practical work_____

1.6. Student responsibilities

Students are obliged to conduct the internship as defined by the plan laid out by the host institution and according to the agreement with their supervisor. The students are required to observe the norms of academic integrity and all other professional and ethical principles.

1.7. Monitoring of student work

Class attendance		Class participation		Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project		Continuous assessment		Report		Practical work	x
Portfolio							

1.8. Assessment of learning outcomes in class and on the final exam

The learning outcomes are not assessed summatively.

1.9. Mandatory literature and number of copies in relation to the number of students who are currently attending the course

Title	Number of copies	Number of students
The literature depends on the agreement with the supervisor of the internship.		

1.10. Additional literature

The additional literature depends on the requirements of the supervisor of the internship.

1.11. Quality assessment ensuring acquisition of learning outcomes, skills and competencies

Assessment interview with the student at the conclusion of the internship, alongside any assessment of skills and competencies conducted by the host institution.

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