

Study programme**Part A) of the study programme *****Learning outcomes**

Faculty offering the field of study:	Faculty of Philosophy and Social Sciences
Field of study:	Cognitive Science
Level of study:	second cycle
Level of the Polish Qualifications Framework:	level 7
Degree profile:	academically oriented
Professional degree awarded to the graduate:	Master
Allocation of the field of study within academic or artistic discipline(s), to which learning outcomes for a given field of study refer:	<p>Disciplines:</p> <ul style="list-style-type: none"> - Social Communication and Media Sciences (57%) - Psychology (10%) - Informatics (10%) - Mathematics (10%) - Biological Sciences (10%) - Philosophy (3%) <p>Major discipline: Social Communication and Media Sciences</p>
Symbol	Upon completion the graduate achieves the learning outcomes specified below:
KNOWLEDGE	
K_W01	The graduate knows in-depth level of the terminology of Cognitive Science in English.
K_W02	The graduate has an advanced knowledge of the syntax of presented programming languages.
K_W03	The graduate understands the most important algorithms and methods used in a given subject.
K_W04	The graduate has advanced and extensive knowledge of multi-paradigm programming languages.
K_W05	The graduate knows in-depth level of the research methods and argumentative strategies appropriate for one of the major subdisciplines of the cognitive sciences.
K_W06	The graduate knows different approaches to computational modeling.
K_W07	The graduate has systematised and detailed knowledge of computational tools.
K_W08	The graduate is familiar with the theorems and laws of selected fields.
K_W09	The graduate has systematised and detailed knowledge about research practices, used logic, and making conclusions.
K_W10	The graduate is familiar with the notions used in given subjects.
K_W11	The graduate understands the physiology of the neural system.
SKILLS	
K_U01	The graduate is capable of verifying hypotheses.
K_U02	The graduate is able to use advanced features of programming languages to solve real-world problems and research tasks.
K_U03	The graduate is capable of writing clean code.
K_U04	The graduate is able to study and critically evaluate research papers in English.
K_U05	The graduate is able to communicate acquired knowledge of functional brain development in English.

K_U06	The graduate is capable of selecting the computational method to carry out computations and answer scientific questions.
K_U07	The graduate is able to work with matrices .
K_U08	The graduate selects argumentative strategies, formulates responses to criticism.
K_U09	The graduate has advanced skills in constructing proofs and testing hypotheses.
K_U10	The graduate is able to organise his/her own work and can work in a team.
K_U11	The graduate is able to use English language in the field of science and scientific disciplines relevant to the field of study, in accordance with the requirements specified for the B2 + level of the European System for the Description of Languages.
SOCIAL COMPETENCES	
K_K01	The graduate understands the significance of the scientific method in problem solving.
K_K02	The graduate participates in discussion and is open to sharing his/her knowledge with others.
K_K03	The graduate understands the need for continuous training and professional development.
K_K04	On the basis of creative analysis of new situations and problems the graduate independently formulates proposals for their solution.
K_K05	The graduate is open to new ideas and willing to change his/her opinion in the light of available data.
K_K06	The graduate finds solutions to problems on forums and discussion groups and can provide information on how to solve standard difficulties that arise during work.

* A draft of the study programme - Part A) - learning outcomes (with information under the table as to when the plan was evaluated by the Dean's Board and the Board of Disciplines [of Science or the Arts], to which a given field of study is allocated, or Boards of Disciplines [of Science or the Arts], if the field of study is allocated to two disciplines or a commission consisting of representatives appointed by Boards of Disciplines [of Science or the Arts], if the field of study is allocated to more than two disciplines and the Student Government as well as from which academic year it is to be valid – must be signed by the Dean of the Faculty.

(1)

Explanatory notes:

K (before the underscore) – learning outcomes for the field of study

W – knowledge;

U – skills;

K (after the underscore) – social competences.

(2)

The description of expected learning outcomes for studies conducted in a given field of study, level and profile in terms of knowledge, skills and social competences.

Part B) of the study programme

Description of the process resulting in the achievement of learning outcomes

Faculty offering the field of study:	Faculty of Philosophy and Social Sciences
Field of study:	Cognitive Science
Level of study:	second cycle
Level of the Polish Qualifications Framework:	level 7
Degree profile:	academically oriented
Allocation of the field of study within academic or artistic discipline(s), to which learning outcomes for a given field of study refer:	Disciplines: <ul style="list-style-type: none">- Social Communication and Media Sciences (57%)- Psychology (10%)- Informatics (10%)- Mathematics (10%)- Biological Sciences (10%)- Philosophy (3%) Major discipline: Social Communication and Media Sciences
Mode of study:	full-time programme
Number of semesters:	4
Number of ECTS required for the award of qualifications corresponding to the level:	120
Total number of teaching hours:	960
Professional degree awarded to the graduate:	Master
The relationship between the study programme and NCU mission and strategy:	The field of study is created in connection with the commitment in the application for Excellence Initiative – Research University to create at least 3 new English-language fields of study around priority research areas. It also fits in with the internationalization strategy. The program of studies and staff consisting of academic teachers and outstanding researchers representing various scientific fields aims, among other things, to create appropriate conditions for undertaking joint research projects, which is in line with the NCU strategy for 2011-20 (Resolution No. 59, 2011), point A1.6; increasing the number of foreign students and participation of NCU students to scholarship programs, point B1.2, B1.3, creating an original educational offer, in line with the idea of the Bologna Process, point B 1.4, high-quality teaching. B 1.5. First of all, studies in the field of cognitive science are part of the second operational goals of the Nicolaus Copernicus University, mentioned in point B.2.1. i.e. making the educational

offer more attractive with unique interdisciplinary studies.

Courses/course modules along with expected learning outcomes *

Course module	Course	Expected learning outcomes	Forms and methods of teaching ensuring the achievement of learning outcomes	Methods of verifying and assessing expected learning outcomes achieved by the student
Course module I Obligatory General Module	Advanced statistics	The student knows an in-depth level of the terminology and can properly apply it.	Expository teaching methods: - informative lecture - problem-based lecture - discussion -participatory lecture -programmed material Exploratory teaching methods: - laboratory - experimental - classic problem-solving - brainstorming - case study - practical - round table - project work - seminar - SWOT	Knowledge: graded credit -test -presentation of a paper Examination -written examination - oral examination Skills: - project defence - activity -homework -multimedia presentation Social Competences -group project - research report
	Linear algebra - an introduction to data analysis	The student has an advanced knowledge about programming languages and can use it to program.		
	Cognitive Psychology	The student knows an in-depth level of the research methods of cognitive sciences.		
	R Course			
	Developmental Neuropsychology	The student has knowledge about computation and can properly apply it.		
	Network Neuroscience	The student has knowledge concerning neuropsychology and neurophysiology.		
	Theory of computation			
	Basic introduction to programming	The student is capable of formulating and verifying hypotheses and argumentations.		

	with Matlab and Octave	The student is able to communicate acquired knowledge according to scientific standards.		assessment -participation in discussion
	Artificial Neural Networks	The student is able to organise his own work and cooperates with others.		
	Advanced Programming	The student is open to new ideas and accepts critical reviews of his work.		
	Machine learning	The student is responsible and follows the ethical norms.		
	Eye tracking in Cognitive Science			
Course module II Project Module	Excellence Initiative – Research University Project A	The student has advanced knowledge about research procedure and can project and conduct a scientific study.	project work	graded credit presentation of the project outcomes
	Excellence Initiative – Research University Project B			
Course module III Optional Subjects Module (The student chooses 9 from the optional courses)	Running a reproducible research project	The student knows extensively the terminology of the chosen topics and can use it properly.	Classical lecture practical experimental laboratory classic problem-solving observation panel field measurement presentation of a paper	graded credit Knowledge: -test -presentation of a paper -scientific essay - Quiz
	Bioethics	The student has an advanced knowledge about programming languages and can use it.		
	Development of Social Knowledge	The student has knowledge about		

	Digital Humanism	the programming and mathematical basis of AI.	case study	graded credit
	Interpersonal skills training	The student knows different approaches to computational modelling of cognitive processes.		
	Philosophy of CS	The student knows the connection between humanities and science.		
	Reasoning on knowledge, norms and actions	The student can connect social phenomena with evolutionary and developmental approaches to cognition.		
	Computational neuroscience	The student can use proper formal tools in measurement and computation of the collected data.		
	Cognitive logic			
	Advances in logic for cognitive science	The student is tolerant, open-minded and understands ethical consequences of his action.		
	Deep Science and Humanities			
	Social Media and Text Analytics			
	Formal models of mind and action			
	(Biological) signal processing			
	Gender, Brain, Cognition.			
				<p>Skills:</p> <ul style="list-style-type: none"> - project defence - activity -homework -multimedia presentation <p>Social Competences:</p> <ul style="list-style-type: none"> -group project - Research report assessment -participation in discussion

	Critical Analysis of Neuroscience			
	Computer assisted qualitative data analysis			
Elective course module, e.g., university-wide courses or courses included in another field of study that are unrelated to a specific field of study	University-wide courses	The student is open to theories and conceptions stepping beyond his field of interests. The student is not afraid to express his own opinions.	Classical lecture Tutorial Laboratory	graded credit written exam oral exam scientific essay presentation project
Foreign language classes	English for Special Purposes II	The student is able to use English language in the field of science and scientific disciplines relevant to the field of study, in accordance with the requirements specified for the B2 + level of the European System for the Description of Languages	drama staging display practical	Detailed methods and assessment criteria applicable to individual teachers will be presented at the beginning of a given stage of learning. Exam - U01, U03 Oral exam - U02 Colloquium - U01, U03
Diploma project and/ or diploma examination ***	Master Seminar	The student has deep and advanced knowledge concerning the chosen topic of his master thesis.	seminar	graded credit -presentation of a paper Exam

		<p>The student can write scientific papers.</p> <p>The student can construct a theoretical and empirical reasoning.</p> <p>The students can design, perform and describe a scientific study.</p> <p>The student knows his ethical responsibility in reference to the originality of his work, citation, potential conflict of interests and bioethics.</p>		Master thesis
Internships**				
Duration of internships	Not applicable			
Form of internships				
Rules of internships				
Detailed allocation of ECTS credits				
Academic or artistic disciplines, to which learning outcomes refer:				
	Artistic or academic discipline	ECTS credits		
		number	%	
1.	Social Communication and Media Sciences	68	57%	
2.	Psychology	12	10%	
3.	Informatics	12	10%	
4.	Mathematics	12	10%	
5.	Biological Sciences	12	10%	
6.	Philosophy	4	3%	

Course modules	Course	No of ECTS credits	No of ECTS credits in the discipline: (enter names of disciplines)****						No of ECTS credits for elective courses	No of ECTS credits obtained by the student in classes conducted with direct contact with the teacher or tutor	No of ECTS credits obtained by the student as a result of: courses related to academic activity within a discipline or disciplines, to which the field of
			Social Communication and Media Sciences	Psychology	Informatics	Mathematics	Biological Sciences	Philosophy			
Course module I Obligatory General Module	Advanced statistics	4				4			0	2	2
	Linear algebra - an introduction to data analysis	4				4			0	2	2
	Cognitive Psychology	4		4					0	2	2
	R Course	4			4				0	2	4
	Developmental Neuropsychology	4					4		0	2	2
	Network Neuroscience	4					4		0	2	2

	Theory of computation	4				4			0	2	2
	Basic introduction to programming with Matlab and Octave	4			4				0	2	2
	Artificial Neural Networks	4	4						0	2	4
	Advanced Programming	4			4				0	2	4
	Machine learning	4	4						0	2	4
	Eye tracking in Cognitive Science	4	4						0	2	4
Course module II Project Module	Excellence Initiative – Research University Project A	4	4						4	3	4
	Excellence Initiative – Research University Project B	4	4						4	3	4
Course module III Optional Subjects Module Student chooses the optional courses to collect minimum 36 ECTS	Running a reproducible research project	4	4						36	2	4
	Bioethics	4						4		2	1

	Development of Social Knowledge	4		4						2	4
	Digital Humanism	4	4							2	1
	Interpersonal skills training	4		4						2	2
	Philosophy of CS	4	4							2	1
	Reasoning on knowledge, norms and actions	4	4							2	1
	Cognitive logic	4	4							2	1
	Advances in logic for cognitive science	4	4							2	1
	Deep Science and Humanities	4	4							2	1
	Social Media and Text Analytics	4	4							2	1
	Computational Neuroscience						4			2	3
	Formal models of mind and action	4	4							2	2
	(Biological)	4					4			2	3

	signal processing										
	Gender, Brain, Cognition. Critical Analysis of Neuroscience	4						4		2	1
	Computer assisted qualitative data analysis	4			4					2	4
Elective course module, e.g., university-wide courses or courses included in another field of study that are unrelated to a specific field of study	University-wide courses	8	8						8	4	0
Foreign language classes	English for Special Purposes II	3	3						0	3	0
Diploma project and/or diploma examination ***	Master Seminar	17	17						0	10	10
IN TOTAL:		120	Min.68/ 57%	Min.12/ 10%	Min.12/ 10%	Min.12/ 10%	Min.12/ 10%	Min.4/ 3%	52/43%	65/54%	60/50%

This study programme is effective as of winter semester of the academic year 2021/22

This study programme was adopted by :

Rada Dyscypliny: Nauki o Komunikacji Społecznej i Mediach w dniu 10.11.2020 r.

Samorząd Studencki w dniu 3.11. 2020 r.

Radę Dziekańską w dniu 17.11.2020 r.

Komisja Rad Dyscyplin w dniu 17.02.2021r.

.....
(Dean's signature)