

Appendices Master's degree programme Master Human - Machine Communication 2012-2013

Appendix A Teaching outcomes of the degree programme (art. 1.3)

The degree programme is designed to:

- prepare for participation in the fields of Cognitive Science and Computational Cognitive Neuroscience and their applications, Cognitive Engineering, Language and Speech Technology and Human-Machine Communication, and/or for the profession of system or interface designer
- impart specialized knowledge, skills and insight in the field of Cognitive Science and its applications and Human-Machine Communication at a high national and international academic level
- prepare for conducting academic research in the field of Cognitive Science and its applications to Cognitive Ergonomics and Human-Machine Communication

Appendix B Specializations of the degree programme (art. 2.2)

Students must choose one of the following specializations:

- specialization Cognitive Engineering
- specialization Cognitive Language Modeling
- specialization Cognitive Modeling
- specialization Computational Cognitive Neuroscience

Appendix C Content of the degree programme (art. 2.3)

1. The **degree programme** consist of the following compulsory modules with a study load of 5 ECTS unless otherwise stated, with their related form of examination:

Compulsory modules with a study load of 5 ECTS, unless otherwise stated	Form of examinations ¹							
	A	CA	RA	IS	PP	RP	WE	PR
Formal Models of Cognition	X				X			
Cognitive Modeling – Basic Principles and Methods	X		X		X			
Multivariate Models <i>or</i> Repeated Measures							X	
Research project (15 ECTS)						X		
Final Research Project (45 ECTS) <i>or</i> Final Research Project (30 ECTS) <i>and</i> Internship (15 ECTS)				X		X		

In individual cases the Board of Examiners may define one other compulsory module (5 EC) from the following fields: programming, cognitive psychology, statistics, linguistics or cognitive neuroscience.

¹ **Form of examinations:**

A: assignments; CA: computer assignment; DA: design assignment; IA: implementation assignment; IS: internship; RA: research assignment; PP: paper; RP: research project; WE: written exam; PR: oral presentation

2. The different **specializations** also contain the following compulsory modules with a study load of 5 ECTS, with their related form of examination:

Cognitive Modeling

Compulsory modules with a study load of 5 ECTS, unless otherwise stated	Form of examinations ¹							
	A	DA	IA	RA	PP	RP	WE	PR
Cognitive Modeling – Complex Behaviour	X			X	X			
User Models		X			X			
Computational Cognitive Neuroscience	X				X			X

Cognitive Engineering

Compulsory modules with a study load of 5 ECTS, unless otherwise stated	Form of examinations ¹							
	A	DA	IA	RA	PP	RP	WE	PR
Cognitive Engineering		X		X	X		X	
Neuro-ergonomics					X			
User Models		X			X			

Computational Cognitive Neuroscience

Compulsory modules with a study load of 5 ECTS, unless otherwise stated	Form of examinations ¹							
	A	DA	IA	RA	PP	RP	WE	PR
Computational Cognitive Neuroscience	X				X			X
Cognitive Modeling – Complex Behaviour	X			X	X			
Advanced Experimental Skills	X	X			X			

Cognitive Language Modeling

Compulsory modules with a study load of 5 ECTS, unless otherwise stated	Form of examinations ¹							
	A	DA	IA	RA	PP	RP	WE	PR
Language Modeling				X	X			X
Computational Discourse	X	X						X
Computational Simulations of Language Behaviour	X							X

¹ **Form of examinations:**

A: assignments; CA: computer assignment; DA: design assignment; IA: implementation assignment; IS: internship; RA: research assignment; PP: paper; RP: research project; WE: written exam; PR: oral presentation

Appendix D Optional course units (art. 2.4)

1. With the approval of the Board of Examiners, a student may choose one or more of the following optional modules with a study load of 5 ECTS, with their related form of examination:

Elective courses with a study load of 5 ECTS, unless otherwise stated	Form of examinations ¹							
	A	CA	DA	IA	RA	PP	WE	PR
Arguing Agents	X						X	
Auditory Biophysics					X			X
Cognitive Engineering			X		X		X	X
Cognitive Modeling – Complex Behaviour	X				X	X		
Cognitive Robotics	X					X		X
Computational Cognitive Neuroscience	X					X	X	X
Computational Discourse	X	X						X
Design of Multi-Agent Systems				X			X	X
Handwriting Recognition				X		X		X
Language Modeling					X	X		X
Machine Learning				X			X	
Multi-Agent Systems	X							X
Neuro-ergonomics						X		
Perception					X		X	
Robotics			X				X	
Signals and Systems	X						X	
Sound Recognition			X	X		X		
User Models			X			X		
Signals and Systems	X						X	
Sound Recognition			X	X		X		
User Models			X			X		

¹ **Form of examinations:**

A: assignments; CA: computer assignment; DA: design assignment; IA: implementation assignment; IS: internship; RA: research assignment; PP: paper; RP: research project; WE: written exam; PR: oral presentation

2. With the approval of the Board of Examiners, a student may also choose one or more of the following optional modules with a study load of 5 ECTS unless otherwise stated (for form of examination refer to the Teaching and Exam regulations of the appropriate Degree Programmes):

- Advanced Experimental Skills
- Advanced Self-organisation of Social Systems
- Advanced Web Technology
- Cognitive Psychology
- Computational Simulations of Language Behaviour
- Computer-Mediated Communication (10 EC)
- Corpus Analysis
- Dutch Semantics and Language Acquisition (10 EC)
- Memory and Learning
- Multivariate Models
- Natural Language Processing (10 EC)
- Philosophy of Logic: Conditionals
- Philosophy of Mind II: Consciousness and Action
- Philosophy of Neuroscience
- Philosophy of Probability
- Philosophy of Science, Technology and Society: The Information Society
- Programming in C++ (part 1, 2 and/or part 3: 8 ECTS maximum)
- Psychophysiology and its applications
- Cognitive Psychology
- Repeated Measures
- Scientific Visualization
- Semantic Web Technology (10 EC)

Appendix E Entry requirements and compulsory order of examinations (art. 3.2)

- Final Research project:
 - Formal models of cognition, and
 - Cognitive modeling – basic principles and methods, and
 - Multivariate Models or Repeated Measures, and
 - Research project, and
 - at least 60 ECTS of the degree programme
- Robotics: Cognitive Robotics
- Handwriting Recognition: Signals and Systems

Appendix F Admission to the degree programme (art. 4.1.1 + art. 4.2)

1. Students in possession of a Dutch or foreign certificate of higher education that indicates that they have the following knowledge and skills shall be admitted to the degree programme:
 - knowledge of and insight in the subject of Artificial Intelligence
 - knowledge of and insight in the subject of Cognitive Psychology or Cognitive Science
 - knowledge of and insight in the subject of Statistics and Research methods
 - practical skills in Programming
2. The holder of a certificate from the Bachelor's degree programme "Artificial Intelligence" of any university in the Netherlands is expected to have the knowledge and skills listed in Article 4.1.1 and is admitted to the degree programme on that basis.

Appendix G Application deadlines for admission (art. 4.5)

Deadline of Application	Non-EU students	EU students
Artificial Intelligence (admission dates for semester 1 and 2)	1 April and 1 November	1 May and 1 December
Human-Machine Communication (admission dates for semester 1 and 2)	1 April and 1 November	1 May and 1 December

Decision deadlines for international students (art. 4.5.3)

Deadline of Decision	Non-EU students	EU students
Artificial Intelligence	1 June and 1 January 1	1 June and 1 January
Human-Machine Communication	1 June and 1 January	1 June and 1 January