

M.Sc. Artificial Intelligence

Welcome, Master Students!

Svenja Wübker, M.A.



M.Sc. Artificial Intelligence

Agenda

- ☐ **Welcome by Svenja Wübker** (program coordinator)
- ☐ **Welcome by FSI Artificial Intelligence** (student association)
- ☐ **Introduction to the study program**
- ☐ **Q&A**
- ☐ **Introduction to „Campo“ by FSI AI**



M.Sc. Artificial Intelligence

FAU Erlangen-Nuremberg



Contact Persons

- **Program Director**

Prof. Dr. Michael Kohlhase

- Professor for Knowledge Representation/Processing
- Electives: AI I & II; Symbolic Methods for AI



- **Program Coordinator**

Svenja Wübker, M.A.

- advice for your studies
- accreditation of coursework achievements
- support with formalities

study-ai-master@fau.de



FSI AI (Fachschaftsinitiative = Student council initiative)

1. Events from AI students for AI students:

- spend some of your free time for planning activities
- organize pub crawls, game nights, ...
- connect with AI students from different semesters

2. Engage in organizational matters:

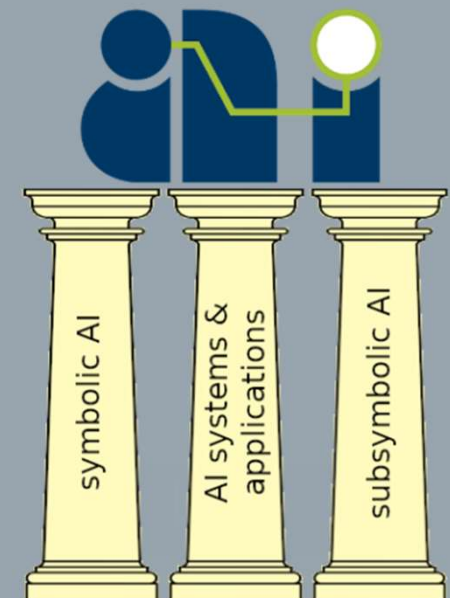
- give feedback regarding changes in the study regulations
 - get involved in improving the AI Master's program
 - give the AI students a voice on faculty level
- Interested? Contact us!
fsi-ai@cs.fau.de

AI pub night, june 2022



M.Sc. Artificial Intelligence

Program structure



Program Structure

- **General structure of Master's programs (recap)**
 - Regular study duration: 4 semesters
 - Required ECTS: 120 ECTS
 - 30 credits: recommended workload per semester
 - 1 credit: $\approx$ 25-30 working hours (attendance-based learning + self study!)

Program Structure

- **General structure of the master program in AI**

- **Electives [50 ECTS]:** The electives are dedicated to academic research around artificial intelligence and its methodologies as well as offering every student the opportunity to sharpen their individual profile. The electives are centred around the three central pillars of the AI master's programme:

Symbolic AI; Subsymbolic AI; AI Systems and Applications

- Students will have to take a total of 50 ECTS credits worth of elective courses, with at least 10 ECTS from each of the central pillars.

Program Structure

- **General structure of the master program in AI**
 - **Projects [10+10 / 10+5+5 ECTS]:** The required projects are intended to test students' acquired technical knowledge, research merit and self-organisation skills.
 - Both projects have to be associated with one of the central pillars discussed above and cannot both be associated with the same pillar.
 - **Seminar [5 ECTS]:** The seminar will allow students to connect with a topic complex of their choice and research and interact with academic information and present their findings to a relevant audience.

Program Structure

- **General structure of the master program in AI**
 - **Minor [15 ECTS]:** Students will choose 15 ECTS credits worth of courses that have a connection to artificial intelligence (but are not already included in the electives). The goal is to work on connecting the gained knowledge to a broad array of subjects. They may form the basis for applications in future employment.
 - You “choose” your minor with the first minor module that you complete
 - If you want to switch your minor, you can contact the Examination Office, but note that modules transferred to the additional achievements may not be transferred back
 - The 15 ECTS have to be completed in the same minor

Program Structure

- **General structure of the master program in AI**
 - **Master's Thesis [30 ECTS]:** The master's thesis can be registered by the thesis supervisor at the Examination Office as soon as the student has successfully collected 60 ECTS credits. It has to be completed within six months after the registration. An oral presentation of the results of about 30 minutes as well as a consecutive discussion are obligatory.
 - The written thesis counts 27 ECTS while 3 ECTS fall to the oral presentation

Program Structure

- Further information on the structure of the program is available in the **Examination Regulation** for the MSc AI program
 - <https://www.fau.de/fau/rechtsgrundlagen/pruefungsordnungen/tech/informatik#artificial-intelligence-ma>
- Basics regarding study programs at the Faculty of Engineering can be found in the general Examination Regulation for the Faculty of Engineering ABMPO (e.g. for part-time studies)
 - <https://www.fau.de/fau/rechtsgrundlagen/pruefungsordnungen/tech/#allg-po-ba-ma>

Program Structure

Module	ECTS	Workload			
		Semester 1	Semester 2	Semester 3	Semester 4
Elective Modules	50	20	20	10	
Project I	10		10		
Project II	10			10	
Main Seminar	5			5	
Minor	15	10		5	
Master's Thesis	30				30
	120	30	30	30	30

The standard progression through the master programme for full-time participants with 30 ECTS per semester.

<https://www.ai.study.fau.eu/>

Program Structure

Electives

Designation	Pillar	Lecturer(s)	SWS	ECTS	WiSe	SoSe
Modellierung, Optimierung und Simulation von Energiesystemen	SA	Prof. Dr. Pruckner	2+2	5.0	x	
Multimedia Security	ML	Dr. Riess	2+2	5.0	x	
Middleware - Cloud Computing	SA	Dr. Distler, Michael Eischer, Laura Lawniczak	4	5.0	x	
Middleware - Cloud Computing (EÜ)	SA	Dr. Distler, Michael Eischer, Laura Lawniczak	4	7.5	x	
Deep Learning	ML	Prof. Dr. Andreas Maier	2+2	5.0	x	
Pattern Recognition	ML	Prof. Dr. Andreas Maier	3+1+2	5.0	x	
Interventional Medical Image Processing	ML	Julian Hoßbach, Prof. Dr. Maier, Tristian Gottschalk	4+4	10.0	x	
Medical Image Processing for Diagnostic Applications	ML	Julian Hoßbach, Prof. Dr. Maier, Tristian Gottschalk	4+4	10.0	x	
Biomedizinische Signalanalyse	ML	Dr. Felix Kluge, Prof. Eskofier	2+2	5.0	x	
Maschinelles Lernen für Zeitreihen Deluxe	ML	Prof. Eskofier, Prof. Oliver Amft, Dr. Ch. Mutschler	2+2+2	7.5	x	
Vernetzte Mobilität und autonomes Fahren	Sym	Dr. Anatoli Djanatliev	2+2	5.0	x	
Ontologien im Semantic Web	Sym	Prof. Dr. Schröder	4	7.5	x	
Künstliche Intelligenz I	Sym	Prof. Dr. Kohlhase	4+2	7.5	x	
Logik-Basierte Sprachverarbeitung	Sym	Prof. Dr. Kohlhase, PD Dr. Florian Rabe	4	5.0	x	
Informationsvisualisierung	SA	Dr. Roberto Grosso	2+2	5.0	x	
Eingebettete Systeme	SA	Prof. Dr. Teich	2+2	5.0	x	
Eingebettete Systeme mit erweiterten Übungen	SA	Prof. Dr. Teich		7.5	x	
Verifikation digitaler Systeme	Sym	Prof. Dr. Oliver Keszöcze	2+2	5.0	x	
Formale Methoden der Softwareentwicklung	Sym	PD Dr. Tadeusz Litak, Paul Wild	4	7.5	x	
Verteilte Systeme	SA	Dr. Jürgen Kleinöder	2+2	5.0		x
Verteilte Systeme erweiterte Übungen	SA	Dr. Jürgen Kleinöder, Dr. Tobias Distler	2+2	7.5		x
Computer Vision	ML	Ph Ronak Kosti, Dr. Vincent Christlein	2+2	5.0		x
Pattern Analysis	ML	Dr. Christian Riess	3+1	5.0		x
Human Computer Interaction	SA	Prof. Dr. Eskofier	3+1	5.0		x

For language information, please consult Univis
or contact the lecturer of the course.

Sym = Symbolic AI
ML = Subsymbolic AI / Machine Learning
SA = AI Systems and Applications

Please note: An updated
version of the catalogue will
be published every semester!

<https://www.ai.study.fau.eu/>

Keep in mind – some
courses might be offered in
German and/or English!

Program Structure

- **How to find courses that are part of the MSc AI program**
 - Check the module catalogue and Campo
 - You may additionally use the module handbook for more detailed information on specific classes
- **Module catalogue:** is created manually and updated by study program coordinator on a regular basis
- **Module handbook:** is created from data in Campo
 - the layout is created automatically
 - The way the overview on the first pages is structured is sometimes misleading

Program Structure

- **Specifics of MSc AI program:**

- **3 pillars: Symbolic AI, Subsymbolic AI, Systems and Applications**

- Aim: ensure broad education in the field of AI
 - However: Symbolic AI as challenge for many students
 - Keep in mind: Symbolic AI is an essential pillar in the MSc AI program that cannot be avoided e.g. in electives and/or for project

How to find information?

One weblink to rule them all ...

<https://www.ai.study.fau.eu>

<https://www.fau.de>

...including today's presentation!

How to find information?

General information on the internet: search the web for “FAU” + keyword

e.g. FAU + language courses
 FAU + examinations office
 FAU + psychological services
 FAU + semester dates...

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Program Structure – Any Questions?



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What's next?



What's next?

1. **Compile your class schedule**

→ Campo

Introduction:

<https://www.intern.fau.de/lehre-und-studium/campusmanagement-an-der-fau-das-neue-campo-portal/informationmaterial-zu-hisinone-exa/>

2. **Register for courses – only if needed (information in Campo):**

usually via StudOn (see registration link on the respective lecture page in Campo)

If registration is not required, simply go the first meeting.

3. **Register for exams → Campo (t.b.a.)**

What's next?

4. Re-register for SS 2026

→ bank transfer – details via e-mail (t.b.a.)

5. Study & pass exams

→ study groups, time management, practice with old exams from FSI

6. **Actively** report on your conditional subjects

→ Examinations Office (Ms. Barthelmann)

7. Get your 38 Euro ticket (monthly subscription for students for public transport)

<https://www.dbregiobus-bayern.de/tickets/ermaessigungsticket>

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Q&A

It's time for your questions!

