FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG
FACULTY OF ENGINEERING

M.Sc. Artificial Intelligence

Welcome, Master Students!

Prof. Dr. Michael Kohlhase
Jonas Betzendahl

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FACULTY OF ENGINEERING

M.Sc. Artificial Intelligence

Agenda

- ❑ **Welcome by Prof. Dr. Michael Kohlhase** (programme director)
- ❑ **Welcome by Jonas Betzendahl** (programme aide)
- ❑ **Introduction to the study program**
- ❑ **„Q&A“**
- ❑ **„Get together“**

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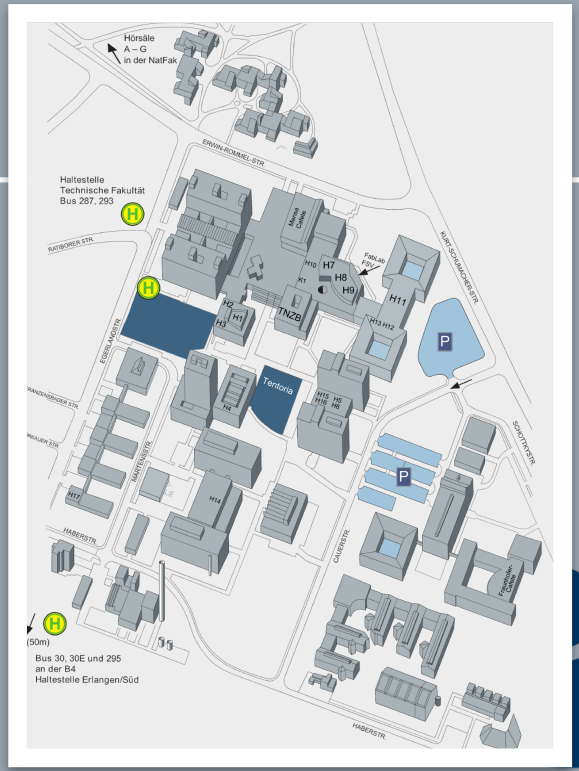
FAU Erlangen-Nuremberg



Persons in Charge/Contact Persons

Program Director

Prof. Dr. Michael Kohlhase

(Professor for Knowledge Representation/Processing)

Program Coordinator

Dr. Felix Schmutterer

- → Advice for your studies
- → Accreditation of coursework achievements
- → Support with formalities
- → E-Mail: studienberatung-ai@fau.de

- **General Study Advisory** (Informations- und Beratungszentrum, IBZ)

  Elisabeth Bächle-Grosso, elisabeth.baechle-grosso@fau.de

  - → General (university-global) study-related problems
  - → Information about changing your study program (advisor for all engineering programs)
  - → Student visa issues (certificate for foreigners office)

- **Examinations Office Faculty of Engineering** (Prüfungsamt TechFak)

  Heike Barthelmann, heike.barthelmann@fau.de

  - → Managing exams, credits, grades online by „meinCampus“ or by paper certificates, withdrawal from exams (due to illness etc.)
  - → Report on conditional subjects / „Auflagen“!

International Office Faculty of Engineering

Christine Mohr, christine.mohr@fau.de

https://www.fau.eu/education/international/

- → Information about studies/internship abroad
- → General help and support for international students

Career Service

career-service@fau.de ; **www.career.fau.de**

- → Help with your job search (also student jobs)
- → Support with applications
- → Check of application documents
- → Training for job interviews
- → Useful workshops and seminars

Office for Gender and Diversity

https://www.gender-und-diversity.fau.de/

gender-und-diversity@fau.de

- Advice for students with children
- Help for students with an immigration background or disabilities
- Information about stipends and mentoring programs for minorities
- Support in cases of (domestic) violence, (sexual) harassment, etc.
- Support for students experiencing discrimination of any kind
  (due to gender, ethnicity, religion, sexual orientation, parenthood and others)

Advice for students with disabilities or chronic diseases

Dr. Jürgen Gündel, juergen.guendel@fau.de
https://www.fau.eu/education/advice-and-services/support-services/students-with-disabilities/

- → General advice and support (e.g. accessibility of buildings)
- → Compensation of disabilities during examinations (e.g. more time, separate rooms...)

Counseling and Psychological Services:

Elizabeth Provan-Klotz, elizabeth.provan-klotz@werkswelt.de
https://www.tf.fau.eu/info-centre/psychological-services/

Psychologisch-Psychotherapeutische Beratungsstelle
Computer Science Tower, Martensstr. 3, 91058 Erlangen, Room: 04.154
Open consultation (confidential sessions via phone or video)

How to find information?

One website to rule them all …

https://www.fau.de

specifically: **https://www.ai.study.fau.eu**

…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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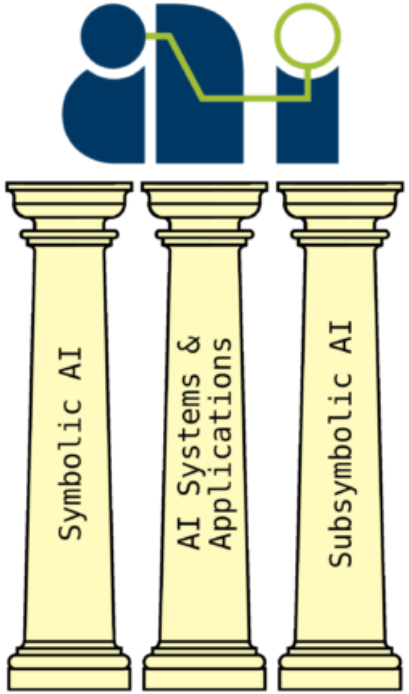
Program Structure

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 ECTS]:** The two required projects (10 ECTS each) are intended to test students' acquired technical knowledge, research merit and self-organisational skills.
    Both projects have to be associated with one of the central pillars discussed above and cannot both be associated with the same pillar.

  - **Master's Thesis [30 ECTS]**: The master's thesis can be registered at the registrar's office as soon as the student has successfully collected 70 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.

Program Structure

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

  - **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.

  - **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.

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

Module Catalogue Master AI

Vorlesungen im Wahlpflichtbereich

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

Bezeichnung	Säule	Lehrende	SWS	ECTS	WiSe	SoSe	Sprache
Modellierung, Optimierung und Simulation von Energiesystemen	SA	Prof. Dr. Pruckner	2+2	5	x		D
Multimedia Security	ML	Dr. Riess	2+2	5	x		E
Middleware - Cloud Computing	SA	Dr. Distler, Michael Eischer, Laura Lawniczak	4	5	x		D
Deep Learning	ML	Prof. Dr. Andreas Maier	2+2	5	x		E
Pattern Recognition	ML	Prof. Dr. Andreas Maier	3+1+2	5	x		E
Medical Image Processing f. Diagnostic/Intervent. Applications	ML	Julian Hoßbach, Prof. Dr. Maier, Tristian Gottschalk	4+4	10	x		E
Biomedizinische Signalanalyse	ML	Dr. Felix Kluge, Prof. Eskofier	2+2	5	x		E
Maschinelles Lernen für Zeitreihen	ML	Prof. Eskofier, Prof. Oliver Amft, Dr. Ch. Mutschler	2+2+2	7.5	x		E
Vernetzte Mobilität und autonomes Fahren	Sym	Dr. Anatoli Djanatliev	2+2	5	x		D oder E
Ontologien im Semantic Web	Sym	Prof. Dr. Schröder	4	7.5	x		D und E
Künstliche Intelligenz I	Sym	Prof. Dr. Kohlhase	4+2	7.5	x		E
Logik-Basierte Sprachverarbeitung	Sym	Prof. Dr. Kohlhase, PD Dr. Florian Rabe	4	5	x		D oder E
Informationsvisualisierung	SA	Dr. Roberto Grosso	2+2	5	x		D
Eingebettete Systeme	SA	Prof. Dr. Teich	2+2	5	x		D/E
Verifikation digitaler Systeme	Sym	Prof. Dr. Oliver Keszöcze	2+2	5	x		D
Formale Methoden der Softwareentwicklung	Sym	PD Dr. Tadeusz Litak, Paul Wild	4	7.5	x		D oder E
Verteilte Systeme (+erweiterte Übungen 4 SWS - Michael Eischer)	SA	Dr. Jürgen Kleinöder, Dr. Tobias Distler	2+2	5		x	D
Computer Vision	ML	Ph Ronak Kosti, Dr. Vincent Christlein	2+2	5		x	E
Pattern Analysis	ML	Dr. Christian Riess	3+1	5		x	E
Human Computer Interaction	SA	Prof. Dr. Eskofier	3+1	5		x	E
Künstliche Intelligenz II	ML	Prof. Dr. Kohlhase	4+2	7.5		x	E
Wissensrepräsentation und -verarbeitung	Sym	PD Dr. Rabe/Prof. Dr. Kohlhase	4+2	7.5		x	D und E
Visual Computing in Medicine 2	ML	PD Dr. Wittenberg, PD Dr. Hastreiter	2+2	5	x	x	E
Approximate Computing	SA	Prof. Dr. Keszöcze, Prof. Dr. Teich	2+2	5		x	E

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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!

Types of Courses

- **V/L = Vorlesung / Lecture:**

  Generally no registration, attendance not mandatory

- **Ü/E = Übung/Tutorium:**

  Exercise class/tutorial – usually start in the 2nd week, further details in the 1st lecture, attendance usually not mandatory

- **P = Praktikum / Practical course (lab course):**

  Attendance mandatory, early registration (see UnivIS)

- **S = Seminar:**

  Attendance mandatory, early registration (see UnivIS)

Types of exams/course achievement

- **Prüfungsleistung (PL) / Graded course achievement (gCA)**
  - schriftlich [written]
  - mündlich [oral]
  - Seminar (presentation and paper)

- **Studienleistung (SL)/ Ungraded course achievement (uCA)**
  - e.g. exercise classes or practical courses
  - Hochschulpraktikum/academic laboratory
  - Forschungspraktikum/research laboratory

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General Information

What is “ECTS”?

- ***European Credit Transfer and Accumulation System***
  Student workload required for the learning outcomes of a program
  - 30 credits: recommended workload per semester
  - 1 credit: ≈ 25-30 work hours (attendance-based learning + self study!)

- You will find information on ECTS in the module catalogs, in the online information system UnivIS, on your Master’s certificate/Transcript of Records

Semesters & Exams

- Regular duration of studies: 4 semesters/two years
  (can be extended to 5 by re-registering + paying the fee)
- Semester: lecture period (14/15 weeks) + lecture-free period (≈ 12 weeks)
- Two exam periods: first 2 weeks and last 3 weeks
  of the lecture-free period ("holidays")
- Failing an exam: **2nd + 3rd chance** in the **following** two semesters (**mandatory** registration)
  – **exception: conditional subjects / "Auflagen" (max. 2 chances, i.e. 1 year!)**
- You can/must only take exams if you **register** for them.
- **Withdrawal** from registered exams: until 3 business days (Mon – Fri) before the exam without a reason – or later in case of illness/severe reasons (medical/other certificate)

Semesters & Exams

Winter Semester 2021/2022 (October 1, 2021 – March 31, 2022):

Lecture Period:	**October 18, 2021 – February 11, 2022**
Re-Registration for SS 2022:	**February 1 – February 8, 2022** (also, see email)
Semester break (lecture-free):	**February 12, 2022 – April 25, 2021**
Exams:	**February 14 – 25 and April 4 – 22, 2022**

All of this and more:

www.fau.eu/study/current-students/semester-dates/

Conditional Subjects / “Auflagen”

- **Must be passed within one year!**
  (deadline: October 2022).
  Otherwise, they will prevent successful re-registration for the 3rd semester.
  No exceptions!

- **After successful completion of conditional subjects:**
  Actively inform Mrs. Barthelmann (Examinations Office)!

- **Examination results of the 2nd semester might be published late.**
  If this is the case, contact your lecturer to get the results faster.

Foreign Language Training

Sprachenzentrum (Language Center), Bismarckstraße 1; www.sz.fau.de

- Courses during the lecture period are **free of cost.**
- Intensive courses (with a fee) during the semester break
- **Registration** is required for all courses.
- Registration for **German courses**: online (+ in person; **open as of now**); **highly recommended for internships & future jobs!**
- Recommended languages to prepare for studying abroad:
  e.g. English, Spanish, Portuguese

Many of you will want to stay in Germany …

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Online Tools https://youtu.be/IMEg2XEf3ik

IdM portal: www.idm.fau.de

Manage your personal data!

An IdM login is required for *nearly all* personalized online services at FAU!

- Activate your **IdM account** with the activation password mailed to you!
- Upload a photo to generate your student ID card –
  it will be sent to your semester address!
- Problems: service counter/“Service-Theke“ RRZE (Computation Center): next to blue computer science tower (Martensstraße 1), 1st floor
- **All important information regarding your studies will be sent to your FAU e-mail address!**

Mein Campus: Manage Your Exams!

Login: https://www.campus.fau.de

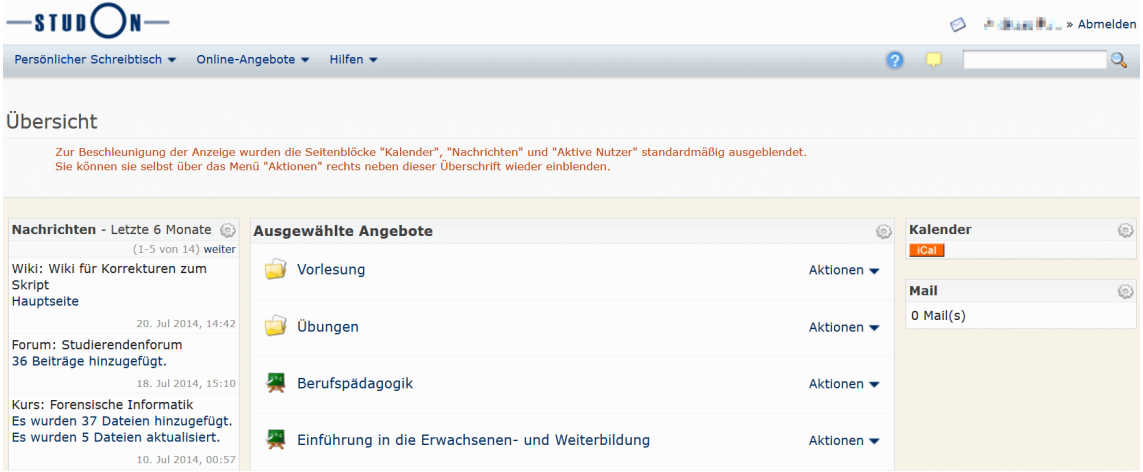
- "Single Sign-On"

- **Prüfungen** (*Exams)*
  - Exam registration (when active)
  - Withdrawal from exams: **three business days** before the exam date (Mon–Fri)
  - Overview of registered exams
  - Overview of grades and acquired ECTS credits

StudOn: Our E-learning platform

Login: https://www.studon.fau.de

- Often used for courses that require registration (seminars, practical courses)
- Platform for sharing course materials



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What‘s next?

What's next?

1. **Compile your class schedule**
   → UnivIS

   Introduction:
https://www.medical-engineering.study.fau.eu/files/2018/09/univis-stundenplan_engl_2-converted.pdf
https://slot.cs.fau.de/

2. **Register for courses – only if needed (information in UnivIS):**
   Usually via **StudOn** (see registration link on the respective lecture page in UnivIS)
   If registration is not required, simply go to the first session.

3. **Register for exams** → MeinCampus

What‘s next?

4. **Re-register for SS 2022**
   → bank transfer – details via e-mail (t.b.a.)

5. **Study & pass exams** → study groups, time management, practice with old exams

6. **Actively report on your conditional subjects**
   → Examinations Office (Mrs. Barthelmann)

7. **Get your semester ticket: https://shop.vgn.de/index.php/product/518/show**

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Q&A

It‘s time for your questions!!!