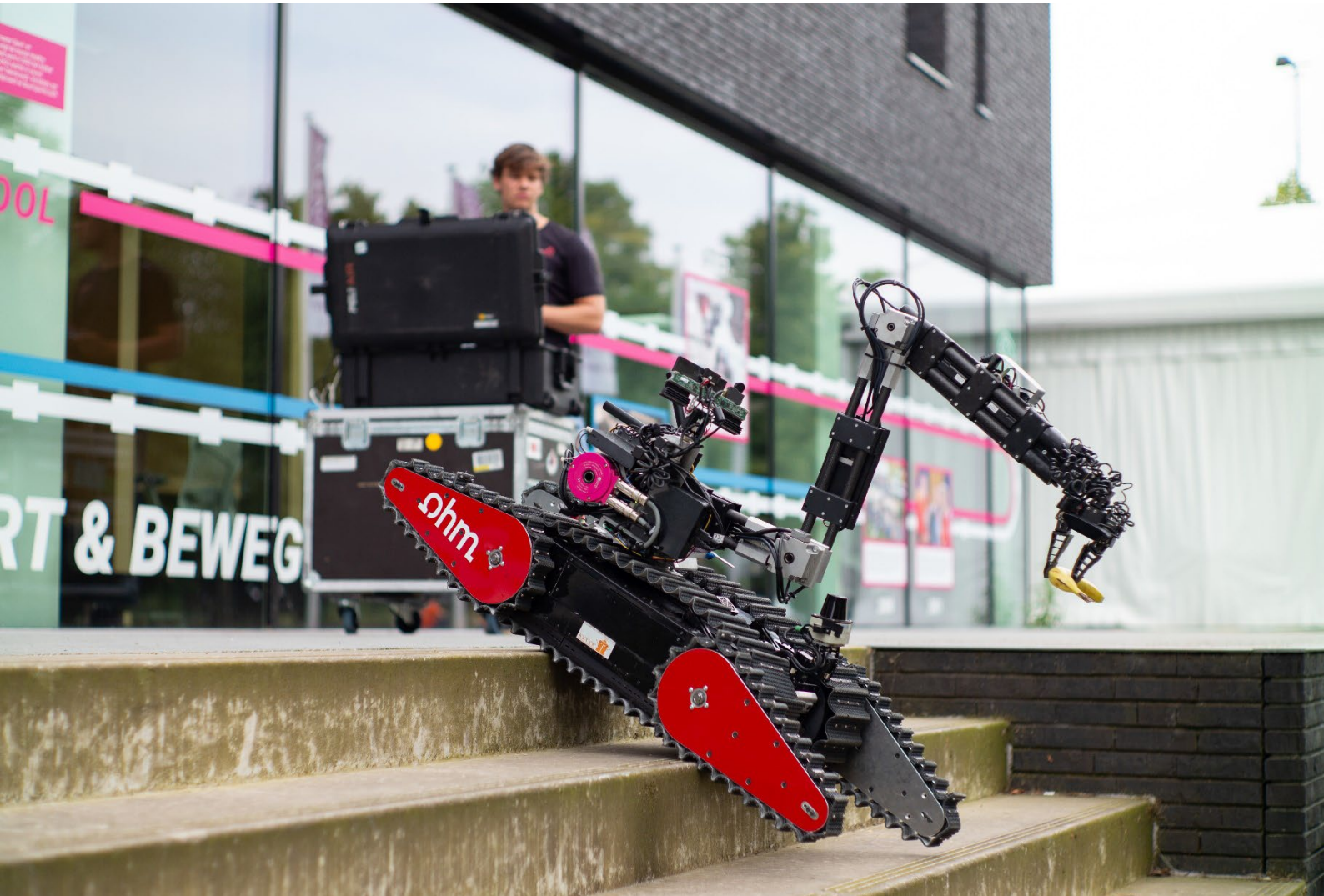


Degree programme overview



Intelligent & Autonomous Systems (M.Eng.) - M-IAS

Degree Programme Head: Prof. Dr. Enrico Schröder

Edition A - valid as of 1 Oct 2025

(pursuant to the Faculty board resolution of 30 July 2025)

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1 General information

1.1 Regulatory basis

This document is based on the following [regulations](#):

- University examination regulations (*Allgemeine Studien- und Prüfungsordnung der Technische Hochschule Nürnberg Georg Simon Ohm*)
- Study and examination regulations of the *Intelligent und Autonomous Systems* master's degree programme at the Technische Hochschule Nürnberg Georg Simon Ohm (SPO M-IAS)
- Module Catalogue – Intelligent & Autonomous Systems (M.Eng.)

1.2 Overview of changes to this document

Edition	Replaced page(s)	Valid as of date	Relevant regulation	Composition (pages and versions)															
				1	2	3	4	5											
A	new	1 October 2025	FRS 30 July 2025	A	A	A	A	A											

1.3 Glossary of abbreviations and acronyms

FWPM	(specialist) required elective module	fachwissenschaftliches Wahlpflichtmodul	Pro	project	Projekt
FRS	Faculty board meeting	Fakultätsratssitzung	Ref	presentation	Referat
Kl	written examination	Klausur	S	seminar	Seminar
LN	assessment	Leistungsnachweis	schrP	written examination	schriftliche Prüfung
ECTS	ECTS credits	Leistungspunkte	SPO	study and examination regulations	Studien- und Prüfungsordnung
LV	course	Lehrveranstaltung	SU	seminar-style lecture	seminaristischer Unterricht
MA	master's thesis	Masterarbeit	SWS	lecture hours per week	Semesterwochenstunden
mündlP	oral examination	mündliche Prüfung	Ü	exercises	Übung
PA	project paper	Projektarbeit	WPM	required elective module	Wahlpflichtmodul
Pr	practical course/laboratory	Praktikum			

2 Programme structure / plan

		Module name	Course format SU/Ü/Pr/S	SW S	LP	Assessments		Comments
						Type	Duration (minutes)	
Semester 1	1	Technology Ethics	2/2/0/0	4	5	PA	-	4)
	2a	Statistics	3/1/0/0	4	5	schrP	90	4)
	2b	Mathematical Foundations of Machine Learning	3/1/0/0	4	5	schrP	90	4)
	3	Trends in Intelligent Systems	0/0/0/2	2	2.5	Ref	20	4)
	4	Data Analytics	2/0/2/0	4	5	schrP	90	4)
	5	AI Accelerators	2/0/2/0	4	5	schrP	90	4)
	6	Language module	2/0/0/0	2	2.5	schrP	90	4) 5)
Subtotal				24	30			
Semester 2	7	FWPM (Advanced studies in specialisation)	12	12	15	See module descriptions		4) see 3.1- 3.2
	8a	Project paper	Pro	10	12.5	PA		1)
	8b	Project Seminar	S	2	2.5	LN		1) 4)
Subtotal				24	30			
Semester 3	9a	Master's Thesis	MA		28			3)
	9b	Thesis Seminar	S	2	2	LN		2) 4)
Subtotal				2	30			
Total				50	90			

How to read the table using Module 4 as an example:

The Data Analytics module has 4 lecture hours (SWS) each week and yields 5 credits. It is offered in the first semester and comprises 2 units of seminar-style lecture (2 SWS SU) and 2 units of a laboratory course (2 SWS Pr). At the end of the first semester, there is a 90-minute written examination.

Footnotes

- 1) The outcome of the project seminar is factored into the project paper grade in proportion with the respective credit points.
- 2) The outcome of the presentation in the thesis seminar is factored into the thesis grade in proportion with the respective credit points.
- 3) 30-minute final presentation, plus discussion and question time
- 4) If a module includes the formats S and/or Pr (a seminar or lab) besides SU (seminar-style lecture), students must pass the seminar or lab in order to pass the module. Attendance is required for seminars (S) and labs (Pr).
- 5) For students who are native speakers of German, they must select a module in a language other than German that comprises the number of SWS and credits listed in the table. For students who are native speakers of other languages, they must select the German language module offered for this degree programme.

3 FWPM (Specialist) required elective modules

The required elective modules (FWPM) provide advanced studies in current fields of work. Each module comprises 4 SWS. A total of 12 SWS of these modules are offered, which means students must select and complete 3 of the required elective modules.

Modules will only be conducted in accord with Faculty resources and student demand. There is no guarantee that all modules will always be offered. If a module is not offered, students must choose another module as an alternative. A non-conflicting timetable can only be ensured for the module sequence provided in the tables below.

The possible specialisations are defined in the tables below. Each specialisation comprises two modules.

One specialisation will be named in the Final Official Transcript, if a student has selected and completed a characteristic module combination as defined in the following tables. If their completed coursework does not reflect either of these tables, "Independent advanced studies" will appear in the Final Official Transcript instead of a specific specialisation.

3.1 Autonomous Systems (ASY) specialisation

Module name	Module - ID	SWS	LP	Module name	Sem. 1	Sem. 2	Examination	
					SU/Ü/Pr/S	SU/Ü/Pr/S	Type	Duration (min.)
ASY1	ASY1	4	5	Environment Perception & Sensor Fusion		2/2/0/0	schrP	90
ASY2	ASY2	4	5	Intelligent Robotics		2/0/2/0	schrP	90

3.2 Medical Technologies (MTE) specialisation

Module name	Module - ID	SWS	LP	Module name	Sem. 1	Sem. 2	Examination	
					SU/Ü/Pr/S	SU/Ü/Pr/S	Type	Duration (minutes)
MTE1	MTE1	4	5	AI for Processing Biomedical Signals		2/2/0/0	schrP	90
MTE2	MTE2	4	5	Anomaly Detection		2/2/0/0	schrP	90

4 Project papers and master's thesis

Details about the requirements for project papers and master's theses are defined in separate documents that are available on the intranet pages of the Faculty (under: Fakultät efi > Downloads > [Downloads für alle](#)).