

EXTENSION PROGRAMME

# ARTIFICIAL INTELLIGENCE ENGINEERING

**Expand Your Degree. Elevate Your Career.**

Info Event | 15.09.2025 | 16:00 | HS 1

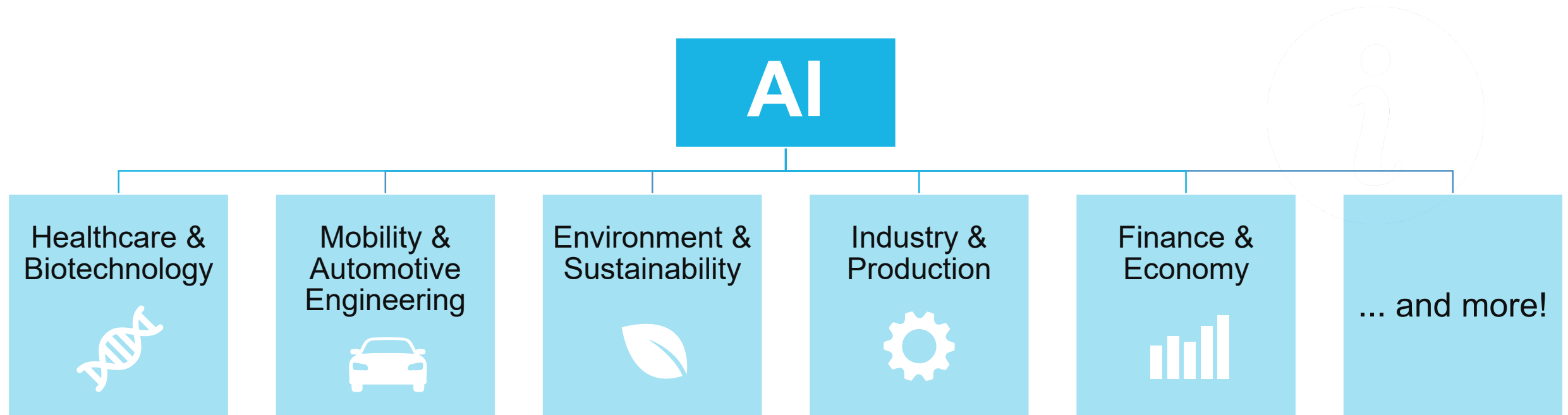
# What is Artificial Intelligence Engineering?

## Quick Facts:

- **Duration of study:** 2 semesters
- **ECTS credit points:** 34
- **Academic degree:** Final Certificate of TU Graz
- **Language of instruction:** English



# What is Artificial Intelligence Engineering?



# Why Artificial Intelligence Engineering?

Bridging the gap:  
From domain  
expertise to AI-  
enabled solutions

AI for cross-  
disciplinary  
competence

Complements  
existing  
studies

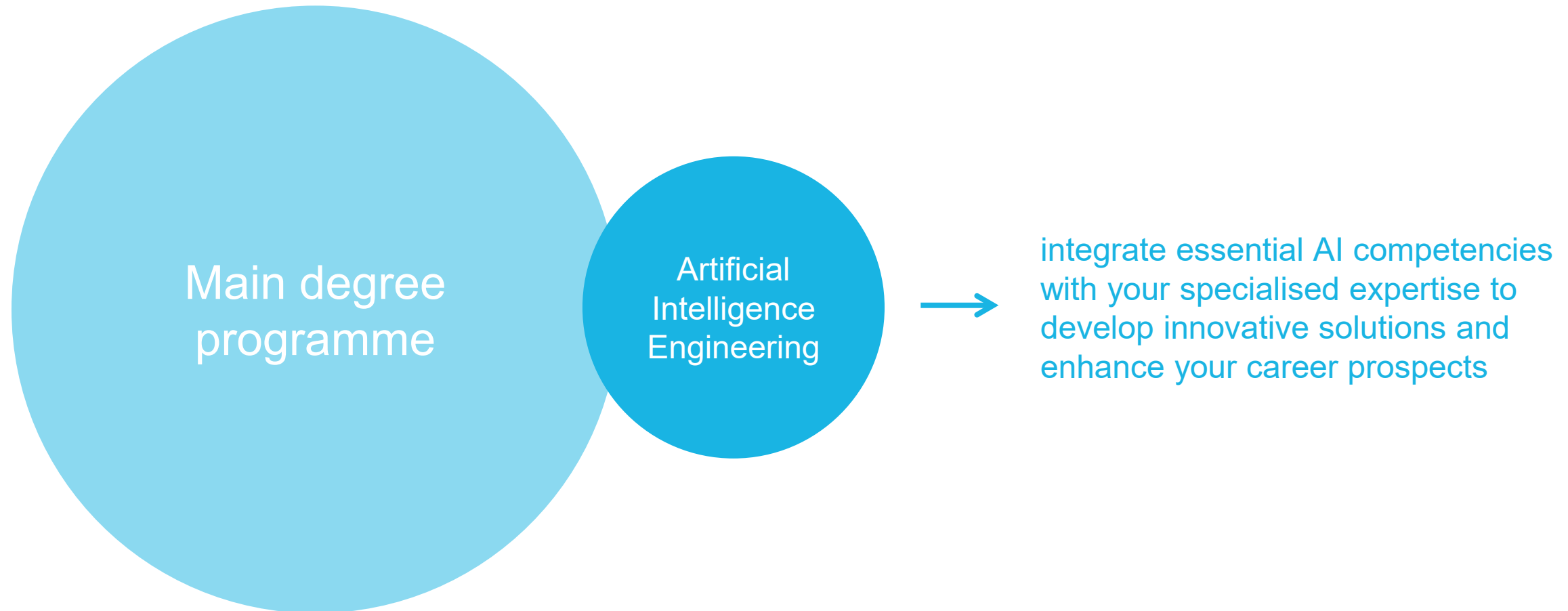
*Because AI is everywhere - enhance your expertise.*

Future-proof  
skills

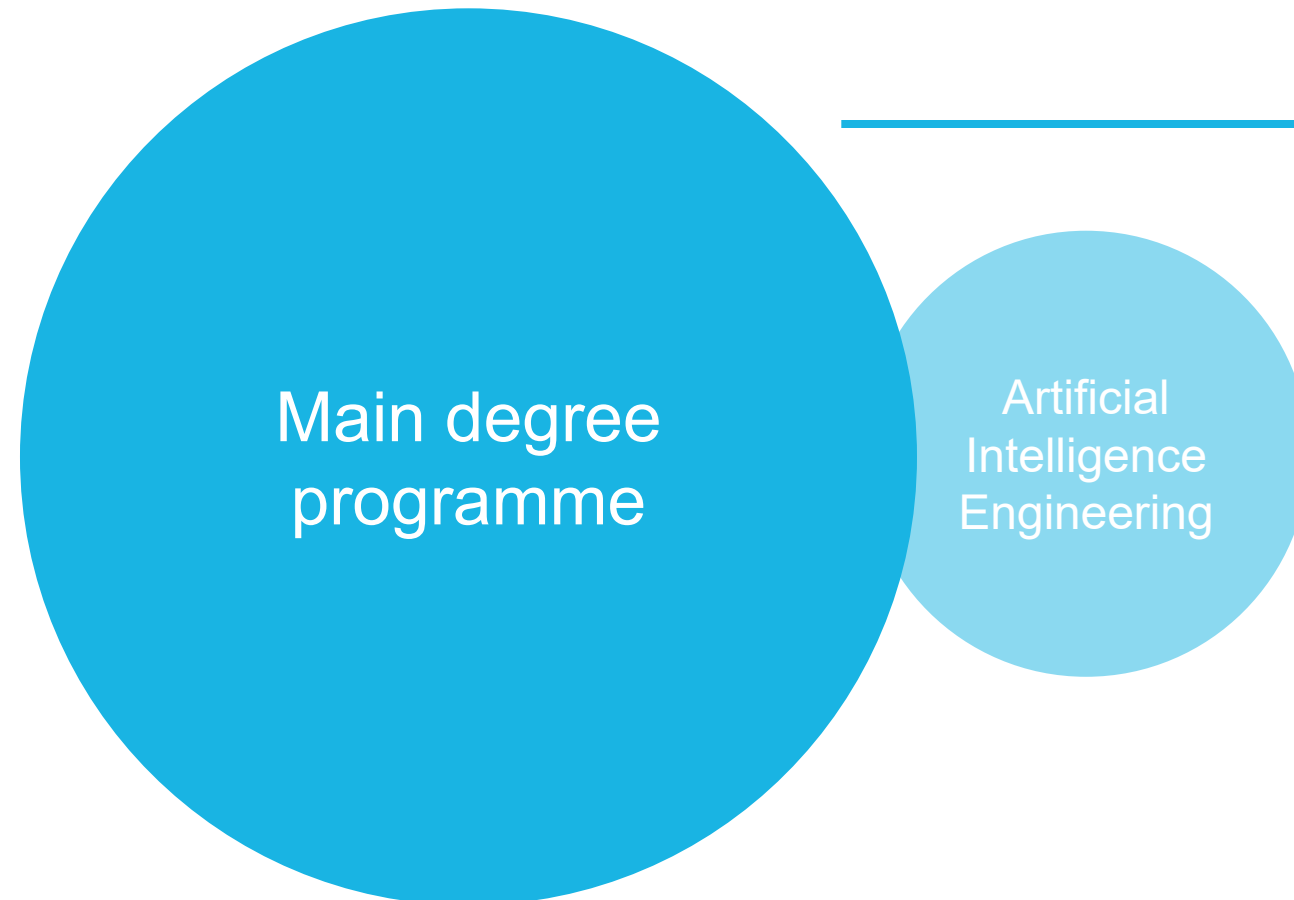
Certificate  
recognition  
& career  
advantages

Driving  
innovation  
& impact

# What is an „extension programme“?



# What is an „extension programme“?

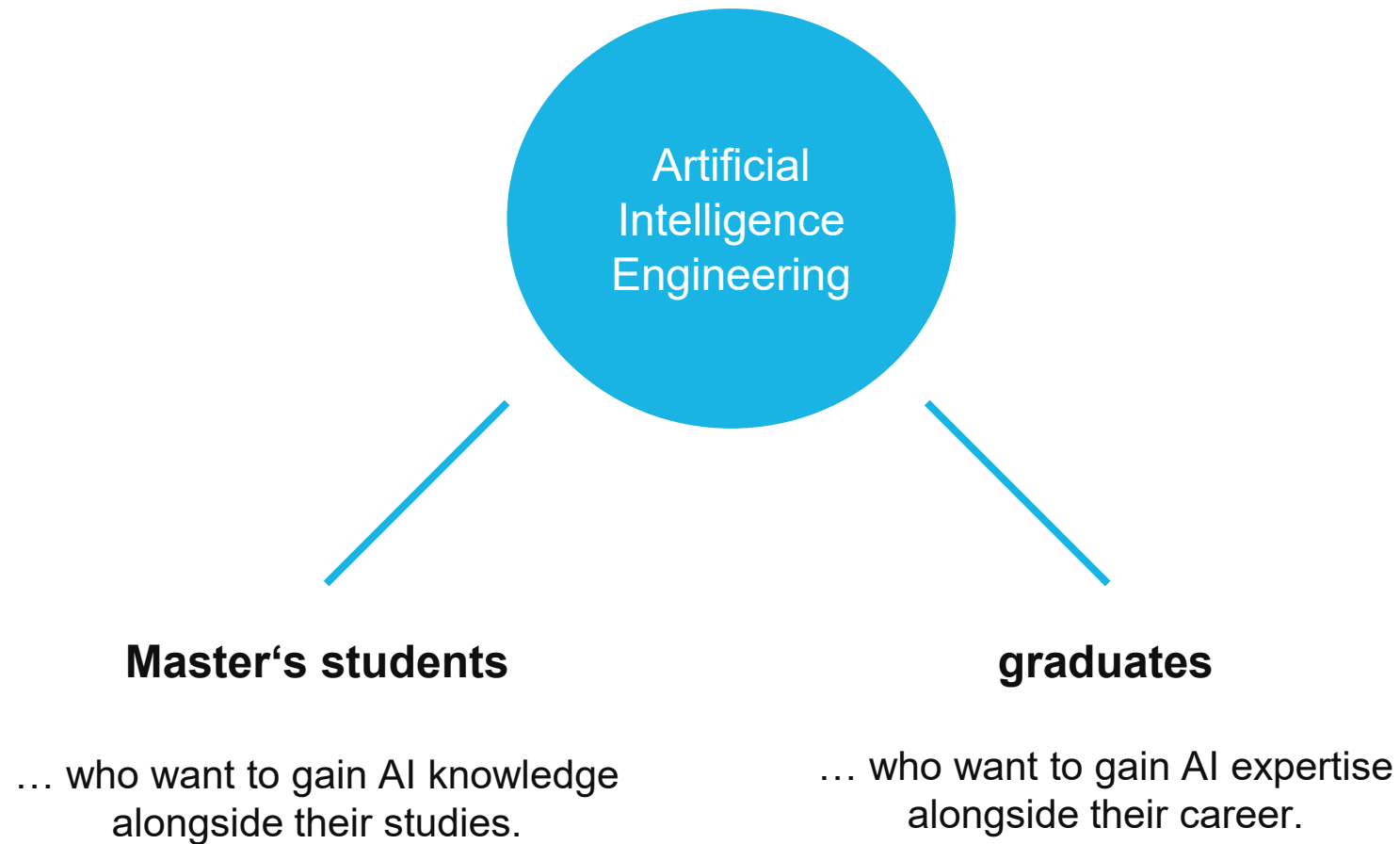


- **currently enrolled Master's programme at TU Graz** (except Computer Science, Information and Computer Engineering, Software Engineering and Management)  
*or*
- **completed Master's programme** in engineering or natural science from an Austrian University

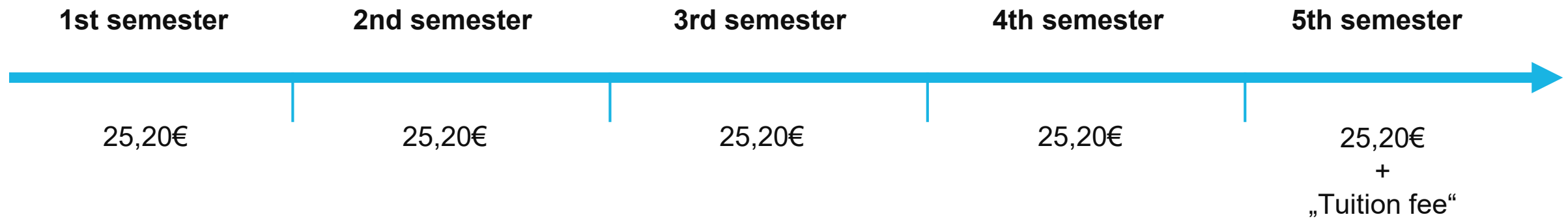
The extension programme can only be completed once the main programme has been completed.



# Who should study AIE?



# How much is an extension programme?





# Courses in Artificial Intelligence Engineering

## **Pflichtmodul A:** Foundations of Computer Science

Informatics 1	VU	4
Informatics 2	VU	4
Introduction to Data Structures and Algorithms	VO	3
Introduction to Data Structures and Algorithms	UE	1,5
		<b>12,5</b>

# Courses in Artificial Intelligence Engineering

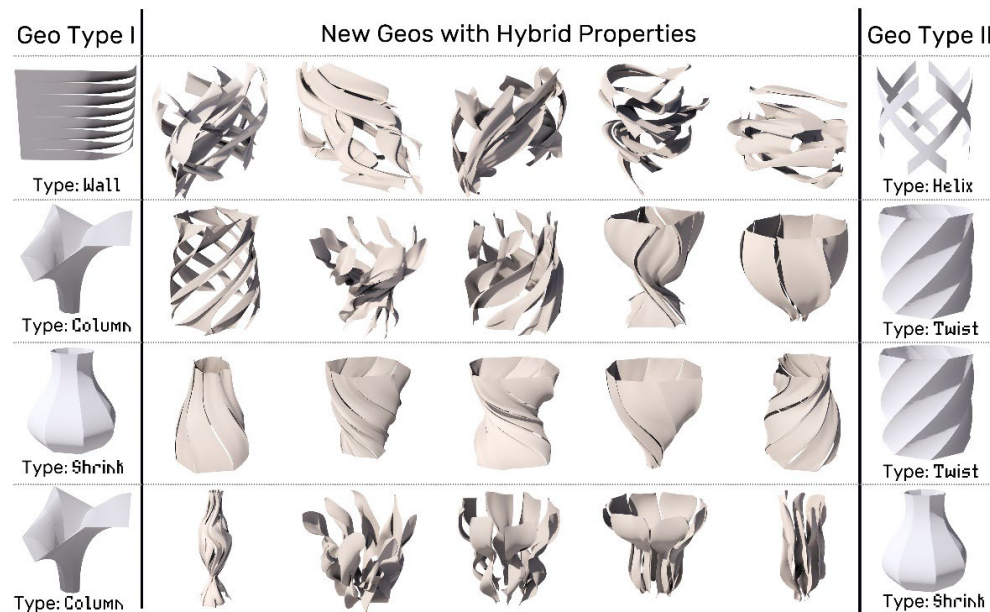
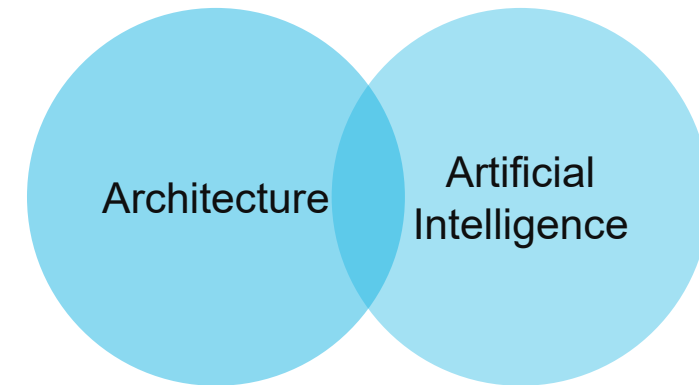
## **Pflichtmodul B:** Foundations of Artificial Intelligence

Artificial Intelligence 1	VU	3
Machine Learning for AIE	VU	4
Deep Learning for AIE	VU	4
Reinforcement Learning for AIE	VU	2,5
Ethical, legal and social aspects of Artificial Intelligence	VO	2
Seminar Project Artificial Intelligence Engineering	SP	6
		<b>21,5</b>

# Seminar Project in Artificial Intelligence Engineering

## Example: Generative AI in Computational Architectural Design

- **Problem definition & data** from architectural design.
- **Model development** with state-of-the-art generative AI algorithms.
- **Generate** novel 3D architectural geometries with AI models!



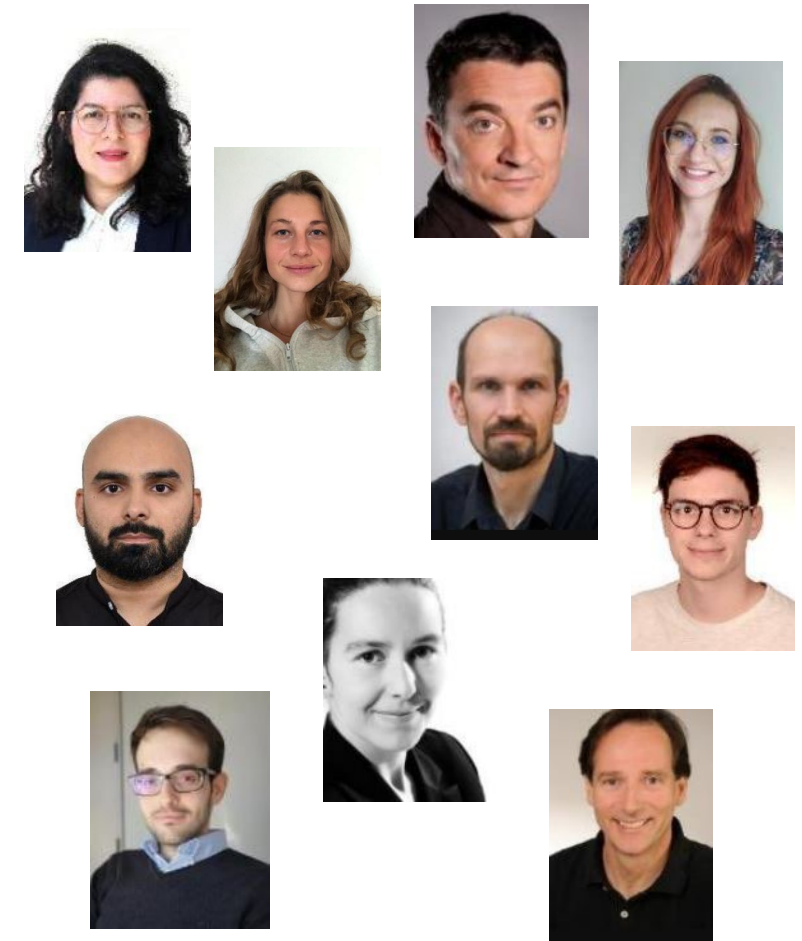
# Meet the AIE Teaching Team

## Pflichtmodul A: Foundations of CS

Informatics 1	VU	4
Informatics 2	VU	4
Introduction to Data Structures and Algorithms	VO	3
Introduction to Data Structures and Algorithms	UE	1,5

## Pflichtmodul B: Foundations of AI

Artificial Intelligence 1	VU	3
Machine Learning for AIE	VU	4
Deep Learning for AIE	VU	4
Reinforcement Learning for AIE	VU	2,5
Ethical, legal and social aspects of Artificial Intelligence	VO	2
Seminar Project Artificial Intelligence Engineering	SP	6



# When will the courses take place?

				Semester	
<b>Pflichtmodul A:</b> Foundations of CS	Informatics 1	VU	4	WS	
	Informatics 2	VU	4		SS
	Introduction to Data Structures and Algorithms	VO	3		SS
	Introduction to Data Structures and Algorithms	UE	1,5		SS
<b>Pflichtmodul B:</b> Foundations of AI	Artificial Intelligence 1	VU	3	WS	
	Machine Learning for AIE	VU	4	WS	
	Deep Learning for AIE	VU	4	WS	
	Reinforcement Learning for AIE	VU	2,5		SS
	Ethical, legal and social aspects of Artificial Intelligence	VO	2		SS
	Seminar Project Artificial Intelligence Engineering	SP	6		SS

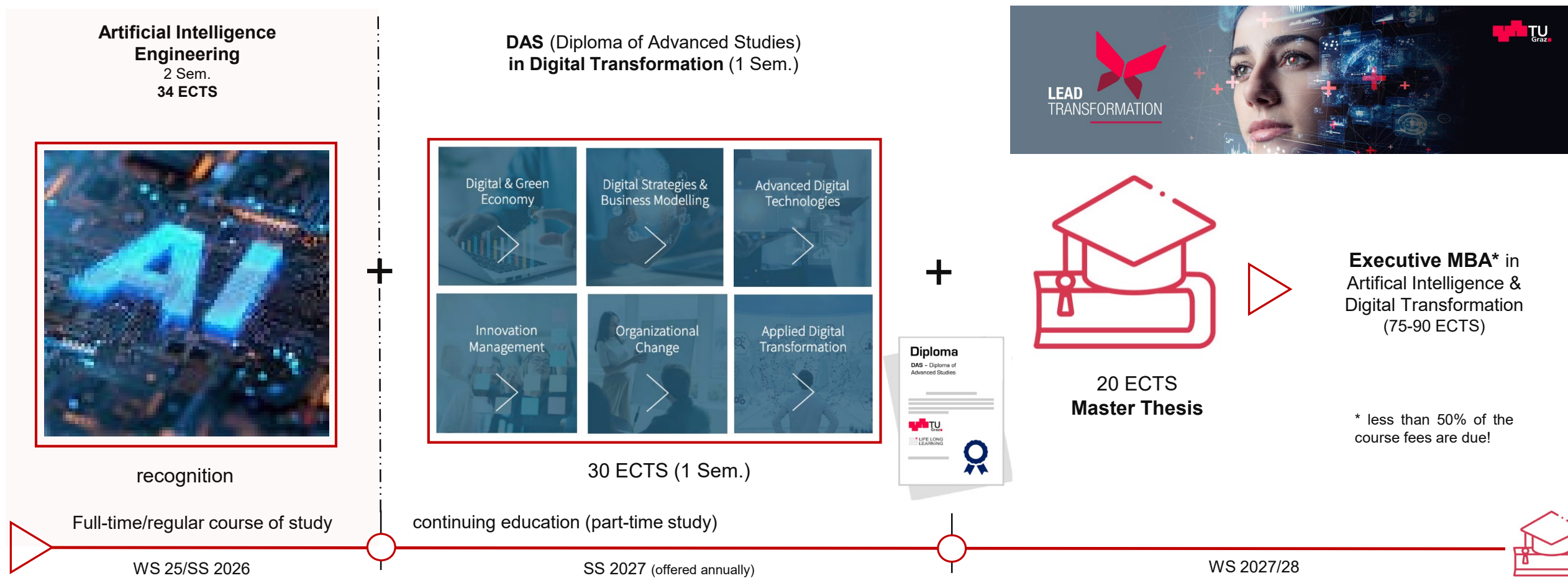
# Starting in October 2025

				Semester		
<b>Pflichtmodul A:</b> Foundations of CS	Informatics 1	VU	4	WS	→	Wed 16:00 - 18:00 @ HS i12
	Informatics 2	VU	4			
	Introduction to Data Structures and Algorithms	VO	3			
	Introduction to Data Structures and Algorithms	UE	1,5			
<b>Pflichtmodul B:</b> Foundations of AI	Artificial Intelligence 1	VU	3	WS	→	Thu 11:00 - 13:00 @ HS i13
	Machine Learning for AIE	VU	4	WS	→	Fri 14:15 - 16:45 @ HS i12
	Deep Learning for AIE	VU	4	WS	→	Thu 16:00 - 18:30 @ HS i1
	Reinforcement Learning for AIE	VU	2,5			
	Ethical, legal and social aspects of Artificial Intelligence	VO	2			
	Seminar Project Artificial Intelligence Engineering	SP	6			

provisional schedule - updates possible

# Extension Programme „up-grade“

further **potential learning journey** for graduates as part of academic continuing education



# Questions?

Contact:  
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*deansoffice.csbme@tugraz.at*  
+43 316 873 - 4050



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