BSc Artificial Intelligence: Study Progression (full-time study) [new version 2025-06-16]

Module no.	Module name	SWS (semester hours)				Total ECTS credits	Distribution of workload per semester in ECTS credits						Type and scope of the examination	GOP
		L	T	P	S		1. WS	2. SS	3. WS	4. SS	5. WS.	6. SS		
Core modules in computer science														
B1	Algorithms, programming, and data representation	4	2	2		**10**	10						EA: WE120 + CA: TA	●
B2	Data engineering	2	2			**5**		5					EA: WE90	●
B3	Applied programming	2	2			**5**		5					EA: WE90 or O30 [1)] and CA: TA	●
B4	Computational complexity	4	2			**7.5**			7.5				EA: WE90	
B5	Introduction to software engineering	2	2			**5**			5				EA: WE90	
Core modules in mathematics														
B6	Mathematics for data science 1	4	4			**10**	10						EA: WE120 + CA: TA	●
B7	Mathematics for data science 2	4	4			**10**		10					EA: WE120 + CA: TA	●
B8	Probability and stochastic processes	2	2			**5**				5			EA: WE60	
Core modules in artificial intelligence														
B9	Artificial intelligence perspectives	2	2			**5**	5						EA: W90 or O30 [1)]	●
B10	Artificial intelligence fundamentals 1	2	2			**5**			5				EA: WE90	
B11	Logic and symbolic artificial intelligence	4	2			**7.5**			7.5				EA: WE60	
B12	Artificial intelligence fundamentals 2	4	4			**10**				10			EA: WE90	
B13	Ethics and philosophy of AI (advanced seminar)				2	**5**					5		EA: WE90	
B14	Application domain fundamentals pursuant to FPOBScAI Section 5					**20**	5	5	5	5			EA: see FPOBScAI Section 5 (3)	

Code	Module		L	T	P	S	ECTS							Examination	
B15	Artificial intelligence electives pursuant to FPOBScAI Section 6						**30**				5	10	15	EA: see FPOBScAI Section 6 (3)	
B16	Artificial intelligence seminar (advanced seminar) pursuant to FPOBScAI Section 7					2	**5**					5		EA: see FPOBScAI Section 7 (3)	
B17	Artificial intelligence project pursuant to FPOBScAI Section 8 [2]						**10**						10	EA: see FPOBScAI Section 8 (3)	
B18	Free Choice pursuant to FPOBScAI Section 9 [3]						**10**		5		5			CA: see FPOBScAI Section 9 (3)	
B19	Bachelor's thesis	Thesis					**15**						12	EA: Written assignment and presentation with discussion (approx. 30+15 Min.) (80% + 20%)	
		Advanced seminar				2							3		
Total SWS and ECTS credits:						**119–136**	**180**	**30**	**30**	**30**	**30**	**30**	**30**		

Key:

[1] The type and scope of the examination are published each semester in the relevant module handbook.

[2] The relationship between attendance time/SWS and own study time varies depending on the specific project.

[3] Free choice of modules offered at FAU with the exception of language courses in English up to and including B1+. The type and scope of teaching units and examinations depend on the specific manner in which the respective module is taught and are regulated by the applicable (degree program and) examination regulations and/or the module handbook.

Abbreviations:

GOP: Grundlagen- und Orientierungsprüfung pursuant to FPOBScAI Section 4. Modules available for choosing are marked.

WE60/WE90/WE120: written examination lasting 60, 90 or 120 minutes.

O20/O30 min: oral examination lasting 20 or 30 minutes.

EA: graded examination achievement (see Section 7 (3) **ABMPO/TF**).

LA: laboratory achievement (see Section 7 (3) **AMBPO/TF** and module handbook).

CA: ungraded course achievement (see Section 7 (3) **ABMPO/TF**).

SWS: semester hours

TA: tutorial achievement (see Section 7 (5) **ABMPO/TF**).

L: Lecture

T: Tutorial

P: Practical

S: Seminar