

Students with Bachelor’s degree from external institution: Starting in summer

This study plan shows our recommendation for choosing courses. Variations in individual cases are possible and can be arranged in consultation with your study advisor.

No.	Module		1st Semester	2nd Semester	3rd Semester	4th Semester	
			ECTS 30	30 ECTS	30 ECTS	30 ECTS	
1	Fundamentals of Geographic Information Science	5 ECTS	Introduction to Geographic Information Science (Lecture 2 ECTS)				
			Advanced Research Methods and Skills (Seminar 3 ECTS)				
2	Interoperability A	10 ECTS	Reference Systems (Lecture + Exercise 5 ECTS)	Spatial Information Infrastructures (Lecture + Exercise 5 ECTS)			
3	Analysis of Spatio-temporal Data	5 ECTS		Analysis of Spatio-Temporal Data (Seminar + Exercise 5 ECTS)			
4	Location Based Services	5 ECTS	Location Based Services (Lecture + Exercise 5 ECTS)				
5	Geoinformation in Society	5 ECTS		Geoinformation in Society (Seminar + Exercise 5 ECTS) *			
6	Advanced Topics in Geographic Information Science *	10 ECTS	Lecture/Seminar/Exercise (5 ECTS)	Study Project (5 ECTS)			
7	Computer Science *	10 ECTS		Study Project (5 ECTS)			
				Lecture/Seminar/Exercise (5 ECTS)			
8	Interdisciplinary Aspects of GI Science *	10 ECTS	Spatial Cognition (Seminar 3 ECTS)				
			Lecture/Seminar/Exercise (6 ECTS)				
			Geoinformatics Forum (Colloquium 1 ECTS)				
9	External Project in Industry or Government	30 ECTS			External Industry or Government Project+ Wrap-up Seminar External Industry or Government Project		
or		or					
10	External Studies	30 ECTS			External Studies + Wrap-up Seminar External Studies		
11	Master Thesis	30 ECTS				Master Thesis including Disputation *	

Blue boxes indicate courses that are mandatory and offered once a year only. These courses need to be taken in the semester indicated in this study plan.

* The course “Geoinformation in Society”, offered every winter semester, can be substituted by the course “Geoinformatics in Transdisciplinary Education” (Seminar, 5/6 ECTS), which is usually offered in the summer semesters.

* The order in which to take the courses in green boxes within these modules is variable. However, we recommend following the sequence shown in this plan.

* The Master Thesis can also be written in the 3rd semester and before the external phase (i.e. the modules 11 and 9/10 can be swapped), if at least **60 ECTS** have been collected in the first two semesters.

Green boxes indicate courses that can be chosen from an agreed course program. Most of these courses can be applied to one of several different modules. The table below shows the eligible courses offered in **summer semester 2019** along with the modules they can be applied to:

Python in GIS (details) (Lecture + Exercise 5/6 ECTS) Eligible for module 6, 7 or 8	Unmanned Aerial Systems for Applied Research (details) (Practical 5/6 ECTS) Eligible for module 8 only
Spatial Data Science with R (details) (Seminar + Exercise 5/6 ECTS) Eligible for module 6, 7 or 8	Study Project "Evaluating routing-algorithm approaches for pedestrian behaviour simulation" (details) (Study Project 5 ECTS) Eligible for module 6 or 7
Advanced Concepts in Software Engineering (details) (Lecture + Exercise 6 ECTS) Eligible for module 7 only	Study Project "Machine Learning with Python and Numpy" (details) (Study Project 5 ECTS) Eligible for module 6 or 7
Geoinformatics in Transdisciplinary Education * (details) (Seminar 5/6 ECTS) Eligible for module 5 or 8	Spatial data in distributed and peer-to-peer systems (details) (Lecture/Exercise 5/6 ECTS) Eligible for module 6, 7 or 8
Geoinformatics in Transdisciplinary Education – Theory part (details) (Seminar 3 ECTS) Eligible for module 8 only	