

Recommended course plan for the MSc degree course Bioinformatics, variant A

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The MSc degree course Bioinformatics Variant A has been designed for students with a Bachelor's degree in Bioinformatics.

The present course plan is based on the exam regulations effective from 1 October 2021. Its sole function is to explain these regulations and to provide recommendations as to which courses may be taken in each respective semester. In case of further questions, please contact the study advisor Prof. Nieselt or the studies coordinator Dr. Markus Zimmermann. Detailed information regarding studies and exams can also be found in the exams and study regulations at: <http://www.wsi.uni-tuebingen.de/studium>.

The MSc degree course Bioinformatics Variant A comprises the following modules:

Sequence Bioinformatics	compulsory, 9 ECTS
Structure Bioinformatics	compulsory, 9 ECTS
Bioinformatics seminar (BIO-SEM)	compulsory, 3 ECTS
Practical Bioinformatics (BIO-PRAK)	2 courses with 3 ECTS each
Bioinformatics elective modules (BIO-BIO), incl. compulsory group project	15 ECTS in total (ECTS can also be obtained by attending Bachelor courses of 3 rd year)
Practical Computer Science elective modules (INFO-PRAK)	6 ECTS in total
Theoretical Computer Science elective modules (INFO-THEO)	6 ECTS in total
Advanced Computer Science (INFO-INFO)	18 ECTS in total (ECTS can also be obtained by attending Bachelor courses of 3 rd year)
Advanced Life Sciences (BIO-LIFE)	18 ECTS in total
Master thesis	30 ECTS

The following course plan is a recommendation only – students are not required to follow this plan. We explicitly encourage students to design their own course of study within the provisions of the exam and study regulations (in particular when to take the courses for INFO-INFO, INFO-PRAK, INFO-THEO). We recommend choosing this depending on the semester-specific offers.

However, we do recommend attending the courses of the *Structure & Systems Bioinformatics* and *Sequence Bioinformatics* modules in the first two subject-specific semesters, and to write the master thesis at the end of your studies during the 4th semester.

Please note, in addition the regulations concerning the Research Project in the study area BIO-BIO; for this, see the information in the module handbook at: <https://uni-tuebingen.de/en/74348>

Recommended course plan MSc Bioinformatics Variant A; start: SS2025

<i>1st semester (summer semester 2025)</i>		
lecture + tutorials	Structure&Systems Bioinformatics , Kohlbacher and Claassen	9 ECTS
Group project	Group project (BIO-BIO) , attached to Structure&Systems Bioinformatics	3 ECTS
lecture / seminar/	<i>Life Sciences (BIO-LIFE)</i> (Biology / Chemistry /Pharmacy MSc courses)	6 ECTS
lecture / seminar	<i>Advanced Computer Science (INFO-INFO)</i>	6 ECTS
lecture	<i>Bioinformatics (BIO-BIO)</i>	6 ECTS
	Total	30 ECTS

<i>2nd semester (winter semester 2025/26)</i>		
lecture + tutorials	Sequence Bioinformatics	9 ECTS
lecture + tutorials	<i>Theoretical Computer Science (INFO-THEO)</i>	6 ECTS
lecture + tutorials	<i>Practical Computer Science (INFO-PRAK)</i>	6 ECTS
lecture +/ seminar	<i>Life Sciences (BIO-LIFE, Biology / Chemistry /Pharmacy MSc courses)</i>	6 ECTS
practical course	<i>Practical Bioinformatics</i> (during the lecture-free period after the semester)	3 ECTS
	Total	30 ECTS

<i>3rd semester (summer semester 2026)</i>		
lecture / seminar/	<i>Life Sciences (BIO-LIFE, Biology / Chemistry /Pharmacy MSc courses)</i>	6 ECTS
seminar	<i>Bioinformatics seminar (BIO-SEM)</i>	3 ECTS
lecture + tutorials	<i>Advanced Computer Science (INFO-INFO)</i>	6 ECTS
lecture + tutorials	<i>Advanced Computer Science (INFO-INFO)</i>	6 ECTS
lecture / seminar/	<i>Bioinformatics (BIO-BIO)</i>	6 ECTS
practical course	<i>Practical Bioinformatics</i> (during the lecture-free period after the semester)	3 ECTS
	Total	30 ECTS

<i>4th semester (winter semester 2026/2027)</i>		
module	M.Sc. thesis	30 ECTS
	Total	30 ECTS

Additional notes for INFO-INFO, BIO-BIO, and BIO-LIFE:

In general, a maximum of 18 ECTS from third-year Bachelor courses can be counted toward the INFO-INFO and BIO-BIO study areas combined. Please note that Bachelor-level courses may be taught in German.

BIO-LIFE: Credit points from courses offered by the biology department that focus on mathematics, computer science, or related topics (e.g., *Matlab for Biologists*) **cannot** be counted toward the required elective modules in the Life Sciences (BIO-LIFE) study area.

A recommendation of courses for the summer semester 2025 and additional information can be found in a separate document.