

Introduction to M.Sc. Bioinformatics Summer Semester 2026

Variants A, B, and C



Dr. Markus Zimmermann
Studies Coordinator
Bioinformatics & Medical Informatics

Welcome!

Department of Computer Science,
University of Tübingen



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<https://commons.wikimedia.org/wiki/File:Tuebingen-gebäude-auf-dem-sand-1.jpg>



Institute for Bioinformatics and
Medical Informatics (IBMI)



Department of Computer Science

Welcome to the Department of Computer Science!

Head & Committees

Research Groups

Staff

[Wilhelm Schickard](#) ushered in the era of computing devices in Tübingen – and never has computer science been as exciting as today, almost 400 years later. The more than [40 groups](#) of the Wilhelm-Schickard Institute (WSI) teach, research and apply **computer science at top level**.

The [research focus](#) of the institute lies in the core areas of **computer science** as well as in **bioinformatics**, **media informatics** and **cognitive science**. Tübingen's computer scientists benefit from the diverse research environment within and outside the University of Tübingen.

The focus on **machine learning** is currently being rapidly expanded, in particular through the [Cluster of Excellence "Machine Learning in Science"](#) and the Baden-Württemberg [Cyber Valley Initiative](#), which also includes the Max Planck Institute for Intelligent Systems and the University of Stuttgart. Together with these strong partners, the **Department of Computer Science** forms one of the centres for **machine learning** in Germany and Europe.

The [study of computer science in Tübingen](#) is correspondingly versatile and at the pulse of time: Join us in studying this young science in our Bachelor's and Master's programmes and become part of the success story!

Facts & Numbers

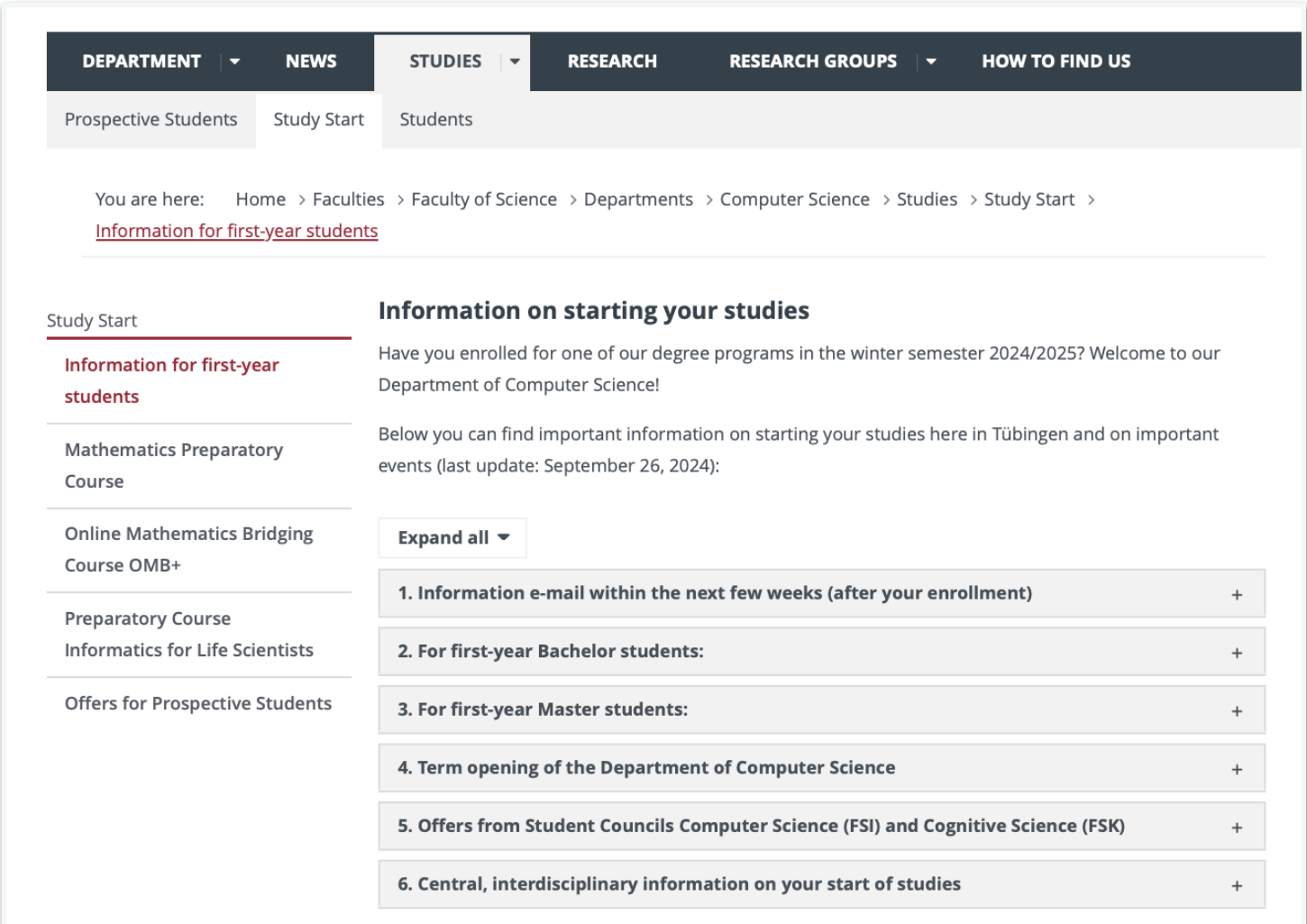
about	in	currently	third-party funded with
2000	19	44	12
students	study programs	research groups	M € in 2021



<https://uni-tuebingen.de/de/13825>

CS Department Webpages

- Information on the department
- Information on the different research groups
- Information on studies



The screenshot displays the 'STUDIES' section of the CS Department website. The navigation bar includes 'DEPARTMENT', 'NEWS', 'STUDIES', 'RESEARCH', 'RESEARCH GROUPS', and 'HOW TO FIND US'. Under 'STUDIES', there are links for 'Prospective Students', 'Study Start', and 'Students'. The 'Study Start' link is active, leading to a page titled 'Information on starting your studies'. The page content includes a welcome message for students enrolling in the winter semester 2024/2025, a list of important information for starting studies, and a sidebar with links to various preparatory courses and offers for prospective students.

DEPARTMENT ▾ **NEWS** **STUDIES** ▾ **RESEARCH** **RESEARCH GROUPS** ▾ **HOW TO FIND US**

Prospective Students Study Start Students

You are here: Home > Faculties > Faculty of Science > Departments > Computer Science > Studies > Study Start > [Information for first-year students](#)

Study Start

Information for first-year students

Mathematics Preparatory Course

Online Mathematics Bridging Course OMB+

Preparatory Course Informatics for Life Scientists

Offers for Prospective Students

Information on starting your studies

Have you enrolled for one of our degree programs in the winter semester 2024/2025? Welcome to our Department of Computer Science!

Below you can find important information on starting your studies here in Tübingen and on important events (last update: September 26, 2024):

Expand all ▾

1. Information e-mail within the next few weeks (after your enrollment) +
2. For first-year Bachelor students: +
3. For first-year Master students: +
4. Term opening of the Department of Computer Science +
5. Offers from Student Councils Computer Science (FSI) and Cognitive Science (FSK) +
6. Central, interdisciplinary information on your start of studies +

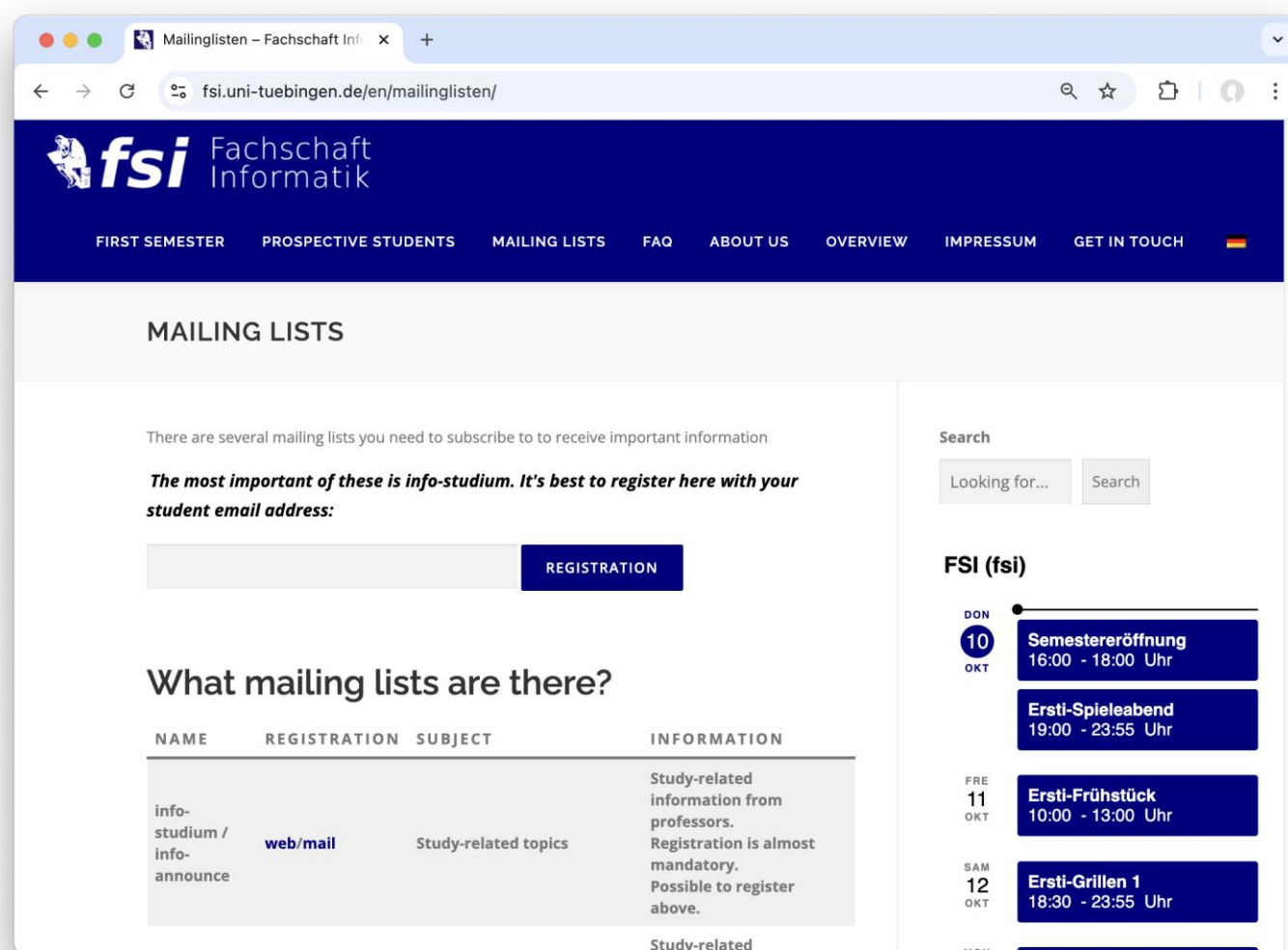


<https://uni-tuebingen.de/en/197597>

Student Council (Fachschaft)

- Represents all students in the CS department
- Provides infos and maintains mailing lists

<https://www.fsi.uni-tuebingen.de/en/>



- Please join their **info-studium** mailing list !

<https://www.ibmi.uni-tuebingen.de>



Faculty of Science / Faculty of Medicine

Institute for Bioinformatics and Medical Informatics (IBMI)

INSTITUTE

NEWS

EDUCATION

PHD

FORSCHUNG

EVENTS

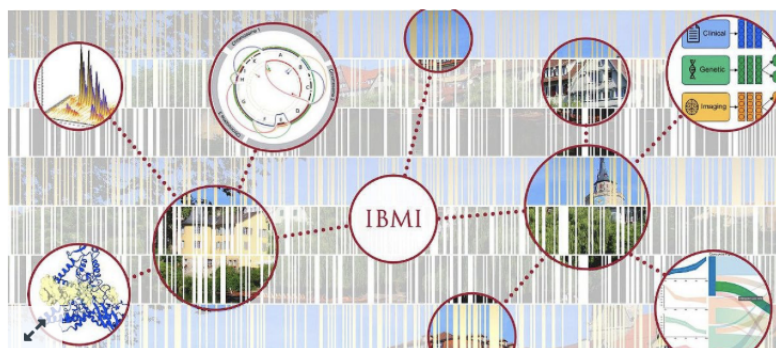
Members

Management

Contact

Members

You are here: [Home](#) > [Faculties](#) > [Faculty of Science](#) > [Departments](#) > [Interfaculty Facilities](#) > [Institute](#)



With the establishment of the **Institute for Bioinformatics and Medical Informatics (IBMI)** the University of Tübingen brings together expertise in informatics, medicine, and the life sciences in a unique institute bridging the existing faculties of science and medicine.

Over the last decades, the use of computer science methods has fundamentally changed research in the life sciences and with the ongoing digital transformation and a pervasive application of artificial intelligence, the entire field is facing new and pivotal challenges. Pooling the expertise in an interdisciplinary institute is thus essential for effective research as well as the comprehensive education of qualified scientists in the digitized life sciences.

News

01.12.2023

The Frankenstein molecule

Resurrection of an ancient antibiotic to create antibiotics of the future

[Read more](#) →

Institute for Bioinformatics and Medical Informatics



Dr. Mete Akgün

✓ [Medical Data Privacy and Privacy-Preserving ML on Healthcare Data \(MDPPML\)](#)
 ✉ mete.akguen@uni-tuebingen.de



Dr. Franz Baumdicker

✓ [Mathematical and Computational Population Genetics](#)
 ✉ franz.baumdicker@uni-tuebingen.de



Prof. Dr. Philipp Berens

✓ [Data Science für die Sehforschung](#)
 ✉ philipp.berens@uni-tuebingen.de



Prof. Dr. Frank Böckler

✓ [Molekulares Design & Pharmazeutische Biophysik](#)
 ✉ frank.boeckler@uni-tuebingen.de



Dr. Thales Kronenberger

✓ [Medizinische Mikrobiologie und Hygiene - Arbeitsgruppe Kronenberger](#)
 ✉ thales.kronenberger@uni-tuebingen.de



Jun.-Prof. Dr. Thomas Küstner

✓ [Medical Image and Data Analysis](#)
 ✉ thomas.kuestner@med.uni-tuebingen.de



Prof. Dr. Andrei Lupas

✓ [Protein Evolution](#)
 ✉ andrei.lupas@tuebingen.mpg.de



Prof. Dr. Sven Nahnsen

✓ [Zentrum für Quantitative Biologie \(QBiC\)](#)
 ✉ sven.nahnsen@uni-tuebingen.de



Prof. Dr. Kay Nieselt

✓ [Integrative Transkriptomik](#)
 ✉ kay.nieselt@uni-tuebingen.de



Prof. Dr. Nadine Ziemert

✓ [Translational Genome Mining for Natural Products](#)
 ✉ nadine.ziemert@uni-tuebingen.de



Prof. Dr. Manfred Claassen

✓ [Clinical bioinformatics & Machine learning in translational single-cell biology](#)
 ✉ manfred.claassen@med.uni-tuebingen.de



Prof. Dr. Carsten Eickhoff

✓ [E-Health and Medical Data Science](#)
 ✉ carsten.eickhoff@uni-tuebingen.de



Prof. Dr. Daniel Huson

✓ [Algorithmen der Bioinformatik](#)
 ✉ daniel.huson@uni-tuebingen.de



Prof. Dr.-Ing. Oliver Kohlbacher

✓ [Angewandte Bioinformatik](#)
 ✉ oliver.kohlbacher@uni-tuebingen.de



Prof. Dr. Stephan Ossowski

✓ [Genomdatenanalyse](#)
 ✉ stephan.ossowski@med.uni-tuebingen.de



Prof. Dr. Nico Pfeifer

✓ [Methoden der Medizininformatik](#)
 ✉ nico.pfeifer@uni-tuebingen.de



Jun.-Prof. Dr. Harry Scells

✓ <https://scells.me>
 ✉ mailto:harrisen.scells@uni-tuebingen.de

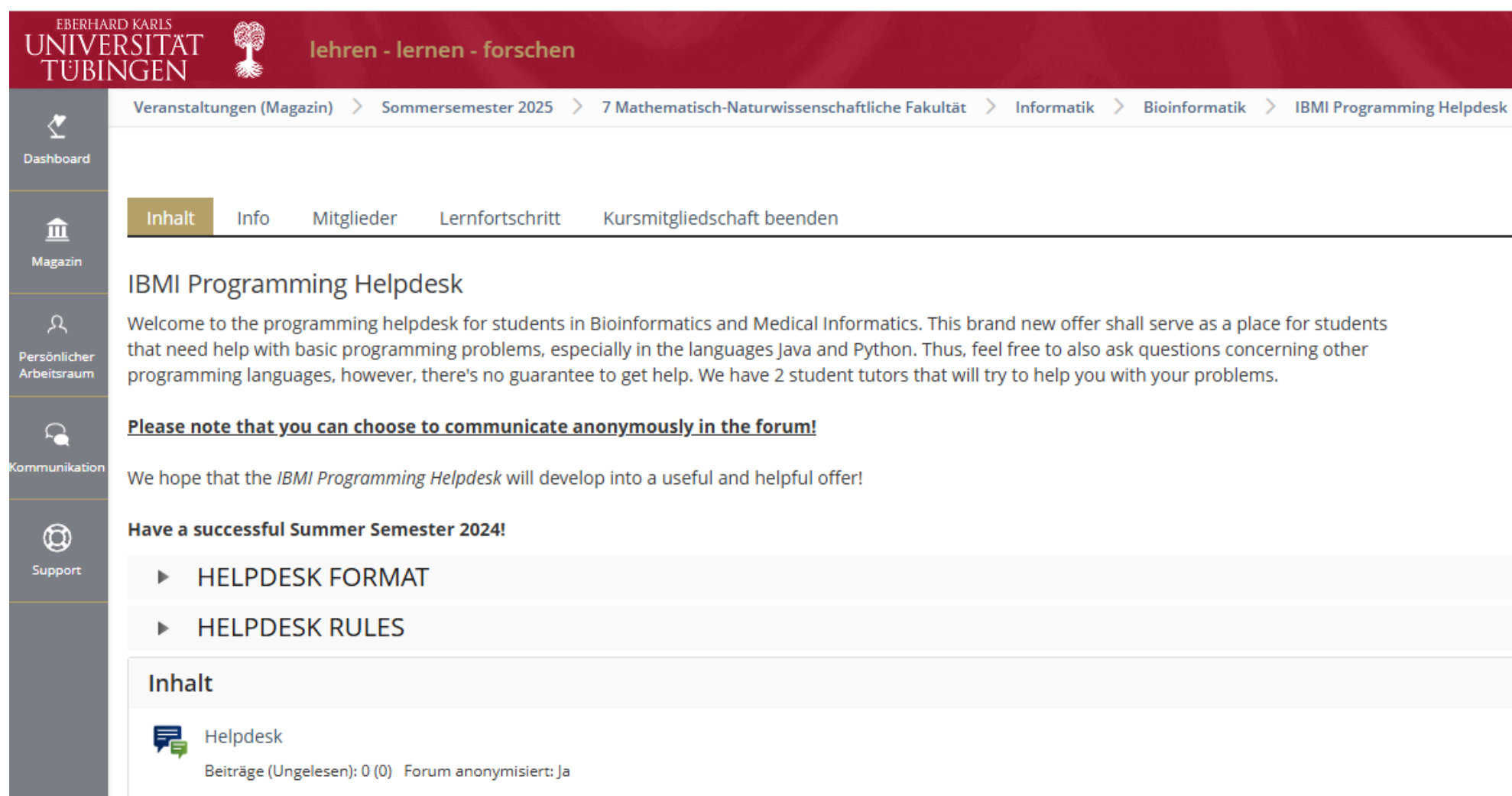


Prof. Dr. Detlef Weigel

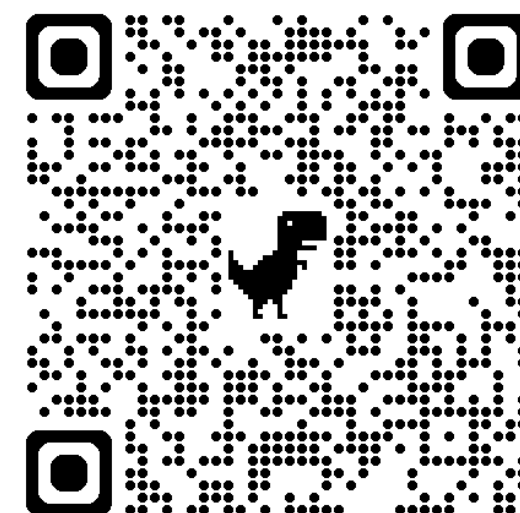
✓ [Molekularbiologie](#)
 ✉ detlef.weigel@tuebingen.mpg.de

IBMI - Programming Helpdesk

- For Bioinformatics and Medical Informatics, with a focus on variant B students
- Offers basic help with problems in Java or Python
- Organized via ILIAS



The screenshot shows the ILIAS interface for the IBMI Programming Helpdesk. The top navigation bar includes the university logo and the text 'lehren - lernen - forschen'. The breadcrumb trail reads: 'Veranstaltungen (Magazin) > Sommersemester 2025 > 7 Mathematisch-Naturwissenschaftliche Fakultät > Informatik > Bioinformatik > IBMI Programming Helpdesk'. The left sidebar contains icons for 'Dashboard', 'Magazin', 'Persönlicher Arbeitsraum', 'Kommunikation', and 'Support'. The main content area has tabs for 'Inhalt', 'Info', 'Mitglieder', 'Lernfortschritt', and 'Kursmitgliedschaft beenden'. The 'Inhalt' tab is active, displaying the title 'IBMI Programming Helpdesk' and a welcome message: 'Welcome to the programming helpdesk for students in Bioinformatics and Medical Informatics. This brand new offer shall serve as a place for students that need help with basic programming problems, especially in the languages Java and Python. Thus, feel free to also ask questions concerning other programming languages, however, there's no guarantee to get help. We have 2 student tutors that will try to help you with your problems.' Below this is a note: 'Please note that you can choose to communicate anonymously in the forum!'. A message states: 'We hope that the IBMI Programming Helpdesk will develop into a useful and helpful offer!'. A section titled 'Have a successful Summer Semester 2024!' contains two expandable items: 'HELPDESK FORMAT' and 'HELPDESK RULES'. At the bottom, the 'Inhalt' section shows a 'Helpdesk' icon and the text 'Beiträge (Ungelesen): 0 (0) Forum anonymisiert: Ja'.



[Link](#)

Studies Administration

- Board of Examiners BSc/MSc Bioinformatics
 - Secretary: Susanne Mischorr
 - pruefungsamt.bioinformatik@uni-tuebingen.de
 - Chair: Prof. Daniel Huson
 - daniel.huson@uni-tuebingen.de
- Studies coordinator
 - Dr. Markus Zimmermann
 - m.zimmermann@uni-tuebingen.de
- Dean of Studies & Studies Advisor Prof. Kay Nieselt
 - kay.nieselt@uni-tuebingen.de

Networking and sharing Information

- **Avoid duplicate requests:**

Many questions (e.g. about exams, deadlines, regulations) are asked repeatedly to different people (coordinator, professors, examination office)

- **Share information with each other:**

If you receive an answer to a general question, please make it accessible to your colleagues

- **Create a communication channel:**

Use a group chat or forum (e.g. WhatsApp, Discord, ..) to distribute relevant information

- **Forward important information (FYI):**

When you receive official answers, you are welcome to forward them to me
Please clearly mark your email as “FYI – no action required”

I am considering setting up a **central webpage/FAQ/** for recurring questions

Alma, Course Pages, Ilias and Moodle

- Catalog of courses Alma:
 - <https://alma.uni-tuebingen.de>
 - Contains all courses offered at the University
- Alma pages usually contain *links* to individual course webpages and pages on the learning platforms:
 - Ilias: <https://ovidius.uni-tuebingen.de>
 - Moodle: <https://moodle.zdv.uni-tuebingen.de>
- Access via: ZDV-Login

Search for courses on Alma



Browse menu

Change role
Dozent/-in Pharmaceutical Institute

HomeCourse organization**Studies offered**OrganisationService

You are here: [Home](#) > [Studies offered](#) > [Search for courses](#)

Search for courses

 [Save search](#)

Search terms

Term



Search

 [Show all possible search criteria](#)

 [Help for search](#)

Use Advanced Search on Alma

EBERHARD-KARLS-UNIVERSITÄT TUBINGEN alma

Browse menu

Home Course organization **Studies offered**

You are here: [Home](#) > [Studies offered](#)

Studies offered

Search for courses
Search for courses by search terms or by extended search criteria.

[Show current courses](#)
The courses of current day will be shown (incl. date, room and teaching person). The date can be changed manually or by a calendar function.

[Show university course catalog](#)
Show all courses in a hierarchic structure.

▶ [Module descriptions](#)
Module descriptions

Save search

Search terms ⓘ

Term

Search [Show all possible search criteria](#) ⓘ [Help for search](#)

Home Course organization **Studies offered** Organisation Service

You are here: [Home](#) > [Studies offered](#) > [Search for courses](#)

Search for courses

Search Reset [Show only quick search criteria](#) ⓘ [Help for search](#) Save search

Basic data ▼

Search terms ⓘ

Term-dependent title

Number

Term

Kind of course = +

Teaching language = +

Structure ▼

Organizational unit = [Select](#)

Courses of study = [Select](#)

Instructors, locations and dates ▼

Instructors [Select](#)

Room = [Select](#)

Date of course ⓘ

Weekday = +

Alma, Course Pages, Ilias and Moodle

EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Browse menu

Change role

Dozent/-in Pharmaceutical Institute

HomeCourse organizationStudies offeredOrganisationService

Back1/1

Choose term

Term Sommer 2026

More functions

Information for Periods of Application

Reports

Term planning

EventsContentsUniversity course catalogLinked examinationsModules / Courses of study

Basic data

Title

Structure and Systems Bioinformatics

Eventtype

Lecture/Exercise

Number

BIOINF4120

Frequency of offer

every second semester

Short comment

9 CP

Organizational unit

• Department of Computer Science (person responsible)

Structure and Systems Bioinformatics

Basic data

Responsible

• o. Prof. Dr.-Ing. Oliver Kohlbacher

admitted:

-

Responsible

• Prof. Dr. sc. Manfred Claassen

Events

Information for Periods of Application

Export data as iCalendar (.ics)

Showing single dates

Open details

Changes	Rhythm	Weekday	From - To	Cancellation date	Start date - End date	Exp. Att.	Comment	Performing lecturers	Room
	weekly	Wed	12:00 PM - 2:00 PM	• 05/27/2026	Apr 15, 2026 - Jul 22, 2026		Vorlesung		Hörsaal A2 (A-223) (Cyber Valley Campus, MVL1)

Signing Up for Courses

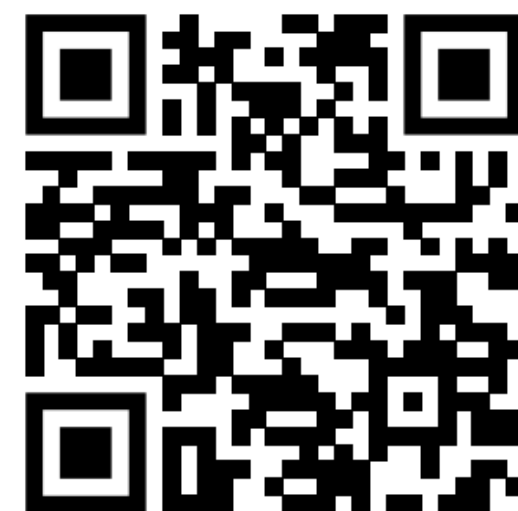
In most cases, you will have to sign up for a course in *two* steps:

- First, most courses require that you *enroll* via Ilias or Moodle to get access to materials, assignments and tutorials. **Do this early.**
- Second, you must use Alma (or in rare cases contact the board-of-examiners' secretary) to *register* for the course exam. **Do this second.**
(Rarely, a separate document is needed)

PO and Module Handbook

- The “Prüfungs- und Studienordnung der Universität Tübingen für die Studiengänge Bioinformatik, ... und Medizininformatik ... Master of Science (M.Sc.) 2021” (PO) contains the regulations for the MSc Bioinformatics program.
- The PO lists the *modules* that you must complete.
(2 documents: general and special provisions. Please browse both documents!)
- The *module handbook* contains the details of the modules.
(course descriptions, study areas, ECTS, prerequisites, etc.)

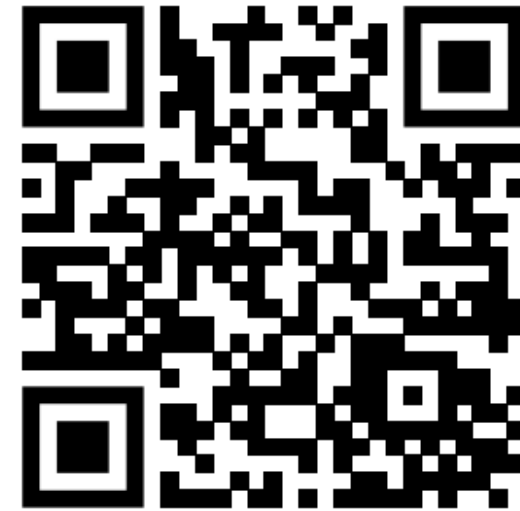
<https://uni-tuebingen.de/en/74348>



Courses to Modules

- This page lists all CS courses and states which modules each can be used for:

<https://courses.cs.uni-tuebingen.de>



Bachelor					Master					Informatik				Bioinformatik						
    									Studienbere	Studienbere	Studienbere	Studienbere	Studienbere	Studienbere	Studienbere	Studienbere	Studienbere	Studienbere	Studienbere	
Titel	Lehrform	ECTS	Kennung	Dozent	INFO-PRAK	INFO-THEO	INFO-TECH	INFO-INFO	BIO-SEQ	BIO-STRUK	BIO-SEM	BIO-BIO	BIO-PRAK	INFO-PRAK	INFO-TH					
Parametrisierte Algori...	V	6	INFO-4413	Dorn		✖		✖												
Parametrisierte Algori...	S	3	INFO-4414	Dorn				✖												
Parametrisierte Algori...	V, Ü	9	INFO-4417	Dorn		✖		✖												
Seminar zu ausgewä...	S	3	INFO-4999	Alle Do...				✖												
Ausgewählte Theme...	V, Ü	6	MEDZ-4310	Dozent...																
Ausgewählte Theme...	V	9	MEDZ-4320	Dozent...																
Mathematische Meth...	S	3	BIOINF43...	Mostoli...				✖			✖	✖								
Systembiologie II	V, Ü	6	BIOINF439 4 (entspricht BIO-4394)	Dräger								✖								
Informationsverarbeit...	S	3	INFO-4250	Franz				✖												
Intelligent Systems II ...	V, Ü	6	INFO-4177	Gehler,...				✖												
Implementierung Rel...	V, Ü	9	INFO-4141	Grust	✖			✖						✖						
Datenbanksysteme u...	V, Ü	6	INFO-4142	Grust	✖		✖	✖						✖						
Deklarative Datenba...	V, Ü	6	INFO-4147	Grust	✖			✖						✖						
Spezielle Kapitel zu ...	V, Ü	6	INFO-4149	Grust	✖			✖						✖						

MSc Bioinformatics

Three variants:

- A - already have a BSc in Bioinformatics (International program)
 - B - have a BSc in Biology (or similar)
 - C - have a BSc in Computer Science (or similar)
-
- PO 2021
 - 120 (ECTS) credits
 - Duration: 4 Semesters
 - Max. duration: 7 Semesters
 - Courses in Bioinformatics, Computer Science and Life Sciences
 - Master thesis
 - 30 ECTS, 6 months
 - Thesis (27 ECTS) is jointly posed and examined by two professors, usually one from bioinformatics and one from life sciences
 - Concluded with a presentation (3 ECTS)

Example Study Plans

- For each variant A-C, you can find an example study plan here:

<https://uni-tuebingen.de/de/176487>



Study Plans

Study plans describe the recommended course of study in accordance with the applicable examination regulations.



Bioinformatik

📄 [Studienplan M.Sc. Bioinformatik Variante A Start WS 2425 \(englisch\) \(PDF\)](#)

📄 [Studienplan M.Sc. Bioinformatik Variante B Start WS 2425 \(PDF\)](#)

📄 [Studienplan M.Sc. Bioinformatik Variante C Start WS 2425 \(PDF\)](#)

📄 [Studienverlaufsplan-BSc-Bioinf-StudienbeginnSS2024 \(PDF\)](#)

📄 [StudienverlaufsplanMScBioinfo-VarA-StartSommersemester2024_EN \(PDF\)](#)

📄 [StudienverlaufsplanMScBioinfo-VarB-StartSommersemester2024 \(PDF\)](#)

📄 [StudienverlaufsplanMScBioinfo-VarC-StartSommersemester2024 \(PDF\)](#)

Admissions for this semester

Variant A

- Bioinformatics

Variant B

- Biology
- Biology / Molecular Medicine
- Food Science and Biotechnology
- Applied Biology

Variant C

- Cognitive Sciences
- Computer Science

Countries: Germany, India, Pakistan, Italy, Netherlands

MSc Bioinformatics Variant A

For students with a BSc in Bioinformatics - International program

	ECTS
• Module Sequence Bioinformatics	9
• Module Structure Bioinformatics	9
• Seminar Bioinformatics (BIO-SEM)	3
• Studies in Practical Bioinformatics (BIO- PRAK)	6
• Studies in Bioinformatics (BIO-BIO)	15
• Studies in Practical Computer Science (INFO-PRAK)	6
• Studies in Theoretical Computer Science (INFO-THEO)	6
• Studies in Computer Science (INFO-INFO)	18
• Studies in Life Sciences (BIO-LIFE)	18
• Master thesis and presentation	30

Example study plan, variant A

<i>1st semester</i>		
lecture + tutorials	Structure&Systems Bioinformatics , <i>Kohlbacher and Claassen</i>	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

See the study plan document for concrete suggestions for courses in CS and Life Sciences

MSc Bioinformatics Variant B

For students with a BSc in Biology (or similar) - requires both English and German

	ECTS
Foundations of Computer Science (BIO-INFO)	27
• Module Sequence Bioinformatics	9
• Module Structure Bioinformatics	9
• Seminar Bioinformatics (BIO-SEM)	3
• Studies in Practical Bioinformatics (BIO- PRAK)	6
• Studies in Bioinformatics (BIO-BIO)	15
• Studies in Computer Science (INFO-INFO)	9
• Studies in Life Sciences (BIO-LIFE)	12
• Master thesis and presentation	30

Example study plan, variant B

<i>1. Semester</i>		
Vorlesung/ Seminar	Studienbereich BIO-LIFE (Masterkurse aus Bio / Chemie / Pharmazie)	In Summe 12 LP
Vorlesung+ Übung	<i>Praktische Informatik II</i> , Studienbereich Grundlagen Informatik, <i>Schuster</i>	9 LP
Vorlesung+ Übung	<i>Grundlagen der Bioinformatik</i> , Studienbereich Grundlagen Informatik, <i>Nieselt</i>	9 LP
	Summe	30 LP

See the study plan document for concrete suggestions for courses in CS and Life Sciences

MSc Bioinformatics Variant C

For students with a BSc in computer science (or similar) - requires both English and German

	ECTS
• Foundations of Life Sciences (BIO-BASIC)	24
• Module Sequence Bioinformatics	9
• Module Structure Bioinformatics	9
• Seminar Bioinformatics (BIO-SEM)	3
• Studies in Practical Bioinformatics (BIO- PRAK)	6
• Studies in Bioinformatics (BIO-BIO)	15
• Studies in Computer Science (INFO-INFO)	12
• Studies in Life Sciences (BIO-LIFE)	12
• Master thesis and presentation	30

Example study plan, variant C

<i>1. Semester</i>		
Vorlesung +Übungen/ Seminar	Studienbereich Vertiefung Informatik (INFO-INFO)	3/6/9 LP
Vorlesung +Übungen/ Seminar	Studienbereich Vertiefung Informatik (INFO-INFO)	3/6/9 LP
Vorlesung	Allgemeine Biochemie, <i>Nürnberger</i> (wenn Teil vom Modul Grundlagen der LW, BIO-BASIC)	3 LP
Vorlesung+ Übung	<i>Grundlagen der Bioinformatik</i> (wenn Teil vom Modul Grundlagen der LW, BIO-BASIC oder Auflage)	9 LP
Summe		18-30 LP

See the study plan document for concrete suggestions for courses in CS and Life Sciences

Additional information

- For INFO-INFO and BIO-BIO, Bachelor's courses from the 3rd year (module numbers starting with 3) can be taken, **BUT:**

The sum cannot exceed 18 ECTS !

Computer Science

course enrollment: no enrollment via alma

B.Sc. Informatik (Version 2021)

100 Compulsory Area: Computer Science

INFM3110 Elective Area: Practical Computer Science

INFM3410 Elective Area: Theoretical Computer Science

INFM3310 Elective Area: Technical Computer Science

INFM2510 Elective Area: Computer Science

B.Sc. Bioinformatik (Version 2021)

100 Compulsory Area: Bioinformatics

BIOINFM6120 Professional Skills

BIOINFM2510 Elective Area: Computer Science

BIOINFM2710 Elective Area: Life Sciences

BIOINFM2210 Elective Area: Bioinformatics

BSc-BIOINFM2210-21 Veranstaltungen: Wahlpflichtfach Bioinformatik

BSc-BIO-INFO-21-VG1 B.Sc. Bioinfo Wahlpflichtfach Bioinformatik (6 CP)

BIOINF3399 Selected Topics in Bioinformatics: Analysis of Next Generation Sequencing Data with Python - Lecture/Exercise

MDZINF3310 Introduction to Statistical Machine Learning for Bioinformaticians and Medical Informaticians - Lecture/Exercise

“Grundlagen”-module Variants B / C

Master Bioinformatik/Bioinformatics

Name:
 Vorname:
 Matrikel-Nr.:
 Bachelor in:

Zu Beginn des Studiums wird durch den Prüfungsausschuss für jeden Studierenden individuell zusammengestellt, welche Grundlagen-Module zu belegen sind.
 Bitte ankreuzen, welche Grundlagen absolviert werden müssen.

Variante B (Bachelorabschluss in Biologie u.ä.)

Grundlagen Informatik (27 LP):

Praktische Informatik I: Deklarative Programmierung (WS) (9 LP)
Intro. to Data Structures and Programming for Life Scientists (WS) (9 LP)
Praktische Informatik II: (SS) (9 LP)
Vorlesung Grundlagen der Bioinformatik (SS) (9 LP)
Theoretische Informatik 1: Algorithmen und Datenstrukturen (WS) (9 LP)
Theoretische Informatik 2 (SS) (9 LP)
Teamprojekt (SS) (9 LP) nur in begründeten Ausnahmefällen
Datenbanksysteme 1 (WS) (9 LP) nur in begründeten Ausnahmefällen

Variante C (Bachelorabschluss in Informatik u.ä.)

Grundlagen Lebenswissenschaften (24 LP):

Biomoleküle und Zelle (Vorl. + Übungen) (WS) (6 LP)
Molekulare Biologie I (Vorlesung) (6 LP)
Anorg.u.Org. Chemie (Vorl. + Praktikum) (WS) (9 LP)
Allgemeine Biochemie (Vorlesung) (SS) (3 LP)
Physikalische Chemie (Vorl. + Praktikum) (WS) (6 LP)
Tierphysiologie (Vorl. + Praktikum) (WS) (9 LP)
Grundlagen der Bioinformatik (Vorl. + Übungen) (SS) (9 LP)

Bitte unbedingt ausfüllen!

Leistungen, die bei Anmeldung der Master-Arbeit erbracht sein müssen:

Only variants B and C will receive this document.
 Please fill in your data and the courses you want to attend for the “Grundlagen” module.

Variant B usually begins with:

- Praktische Informatik II (summer)
- Grundlagen der Bioinformatik (summer)
- Praktische Informatik I (winter)

Recommended study plans will be online this week

* Lectures very similar. Only one can be attended.

Life Sciences (BIO-LIFE)

Please note that courses offered in the field of Life Sciences are **not all listed under the BIO-LIFE category in Alma**, as the range of offerings is too large.

Also, please be aware that (unfortunately) many biology lectures are only offered as **block courses**.

Students may attend lectures or seminars (but not lab courses) in **biology** from the **3rd year of the bachelor's program onwards**, as well as all courses in the **master's program**, including master's-level courses in **chemistry, biochemistry, and pharmacy**.

Please note that courses in these areas that cover topics such as bioinformatics, mathematics, computer science, or similar subjects (e.g., *Bioinformatics Methods in Microbiology*, *Matlab for Biologists*, etc.) **cannot** be counted by bioinformatics master's students toward fulfilling the "Advanced Life Sciences" (BIO-LIFE) study area or any other study areas of the master's program.

We will publish a list of recommended / selected courses for this summer semester.

Life Sciences (BIO-LIFE)

Biology:

Epigenetik des Menschen (Seminar)

Current Topics in Proteome Research (Seminar)

Microbial Pathogenicity (V + Seminar)

Various Seminars about „Ethik in den Biowissenschaften“

Neuroscience:

Courses for Training Centre of Neuroscience

(Only lectures without significant “computational” content)

Geosciences:

Environmental Microbiology and Geomicrobiology (V) 

Advances in Archaeo- and Paleogenetics (V + S oder ohne S)

Introduction to Ancient Microbial Genetics (Blockkurs)

- General environmental microbiology and geomicrobiology
- Microbial degradation of pollutants, bioaccumulation
- Redox zonation, thermodynamics
- Monod and Michaelis-Menten kinetics
- Microbe-mineral interactions
- Bioremediation
- Biogeochemical cycles
- Deep biosphere

Pharmacy:

Drug Discovery Technologies (Seminar)

Frontiers in Applied Drug Design (Block Course, semester break)

Additional information

What about math-lectures ?

Lectures on mathematics (in computer science) are highly recommended, especially the one on linear algebra (i.e. Mathematics for Computer Science 2: Linear Algebra, offered every summer semester).

However, this cannot be credited towards the Master's degree.

For bridging gaps, there is the **Online Mathematik Brückenkurs OMB+**:

<https://uni-tuebingen.de/de/217761>

as well as: **Online course Mathematics In Advanced Studies:**

<https://omias.mumie.net/omias/public/index.html>

Welcome to Tuebingen and
good luck
with your
studies!