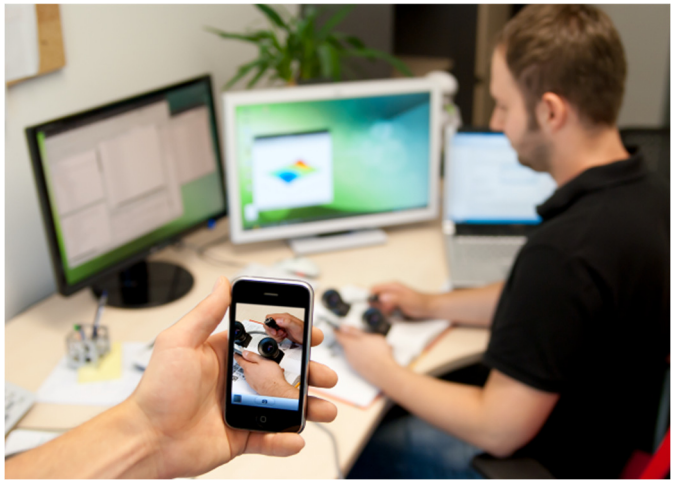


Welcome to the master's program in Computer Science!

Total expenditure

Sum of credits to be achieved: 120

Duration: 4 semesters resp. 2 years

Degree: Master of Science (M.Sc.)

Start of courses

Winter term (October - March): 13. October 2025

Summer term (April - September): 23. April 2025

Language of instruction

Lectures and exercises are in English on demand otherwise in German.

Structure

The structure of the master program is based on the current recommendations of the German Society for Computer Science (GI). It is subdivided into four sections: A. Informatics, B. Projects, C. Languages and D. Master Thesis.

Registration

A registration for courses is NOT needed. It is necessary that you register in advance for all your exams. Please see:

https://my.uni-bayreuth.de/cmlife/welcome

Section A: Informatics

To be achieved: 35 to 45 Credits

More information about all courses will be available online (https://elearning.uni-bayreuth.de). Please note that the courses start at quarter past.

Courses in winter term 2024/25

INF 209: Animation und Simulation (5 Credits)
Lecture: Thu, 12-14, INF-S110, Prof. Guthe
Exercises: Wed, 10-12, NWII-S79, K. Liu

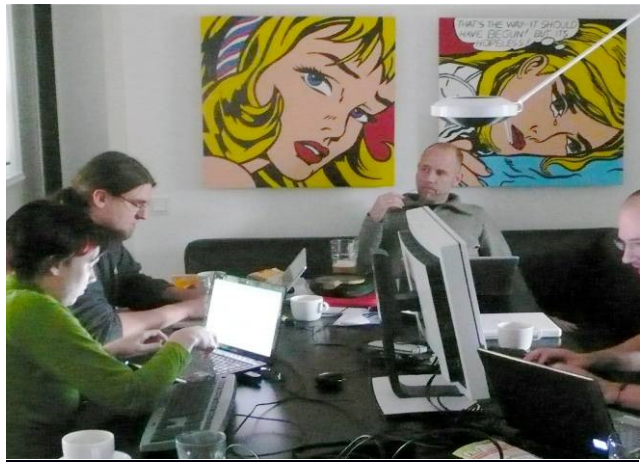
INF 218: Data Analysis and Deep Learning in Python (5 Credits)
Lecture: Tue, 10-12, INF-H33, Prof. Müller
Exercises: to be announced

INF 225: Advanced Software Engineering (5 Credits)
Lecture: Wed, 12-14, INF-S110, Prof. Baltes
Exercises: Mon, 14-16, INF-S112, Prof. Baltes

INF 226: Biomedical Time Series Analysis (5 Credits)
Lecture: Tue, 12-14, NWI–H11, Prof. Leutheuser
Exercises: Thu, 10-12, INF-2.01, Prof. Leutheuser

INF 307: Data Analysis I
(Module: Data Analytics, 8 Credits)
Lecture: Tue, 12-14, INF-H34, Prof. Jablonski
Exercises: Thu, 9-10, INF-S112, Dr. Ackermann

INF 316: Pattern recognition (5 Credits)
Lecture: Thu, 14-16, INF-S110, Prof. Henrich
Exercises: Fr, 12-13, INF-S110, J. Hartwig



INF 328: Process Aware Information System
(Module: Advanced Information Systems, 5 Credits)
Lecture: Wed, 14-16, INF–S112, Dr. Ackermann
Exercises: to be announced

INF 330: Computational Geometry II (5 Credits)
Lecture: Wed, 10-12, INF-S112, Dr. Stehn
Exercises: Tue, 10-12, INF-S112, Dr. Stehn

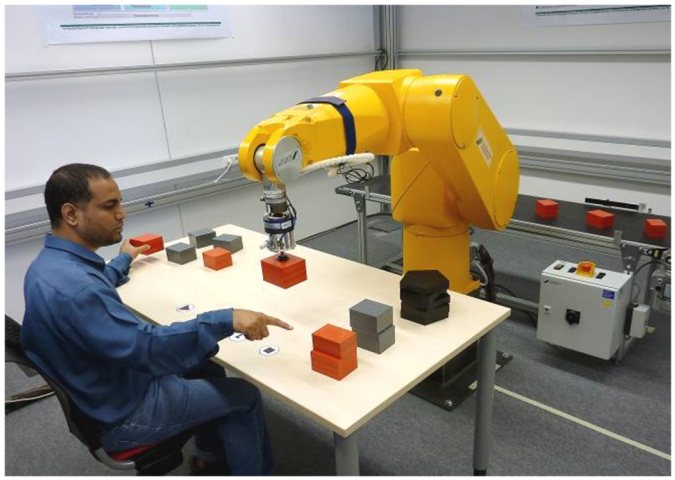
Courses in summer term 2025

INF 202: Computer graphics I (5 Credits)
Lecture: Mon, 14-16, INF-H34, Prof. Guthe
Exercises: Tue, 12-13, INF-S112, K. Liu
Tue, 14-15, FAN-S106, K. Liu
Wed, 12-13, INF-S110, K. Liu

INF 218: Data Analysis and Deep Learning in Python (5 Credits)
Lecture: Tue, 10-12, INF-H33, Prof. Müller
Exercises: to be announced

INF 219: Intelligent User Interfaces (5 Credits)
Lecture: Wed, 14-16, INF-H34, Prof. Buschek
Exercises: to be announced

INF 222: Event Processing (5 Credits)
Lecture: Tue, 14-16, INF-S110, Prof. Mayer
Exercises: Wed, 16-18, NWI-H9, Prof. Mayer



INF 223: Graph Processing and Machine Learning (GPML) (5 Credits)
Lecture: Tue, 16-18, INF-S110, Prof. Mayer
Exercises: Wed, 10-12, BGI-S88 (biweekly) Prof. Mayer

INF 228: Time Series and Machine Learning (5 Credits)
Lecture: Tue, 12:15-13:45, INF-S110, Prof. Leutheuser
Exercises: Thu, 10:15-11:45, INF-1.03, Prof. Leutheuser

INF 305: High Performance Computing (8 Credits)
Lecture: Tue, 8-10, INF-S112, Prof. Rauber
Wed, 8-10, INF-H34, Prof. Rauber
Exercises: Mon, 10-11:30, INF-S112, H. Shatri

INF 307: Data Analysis II
(Module: Data Analytics, 8 Credits)
Lecture: Mon, 12-14, INF-H34, J. Neuberger
Exercises: Tue, 8-10, INF-H34, S. Petter

For INF 307 (Data Analytics) both parts (Data Analysis I and Data Analysis II) are necessary

INF 315: Robotics II
(Robotik II, 5 Credits)
Lecture: Thu, 14-16, INF-S110, Prof. Henrich
Exercises: Tue, 12-13, NWII-S70, J. Hümmer

INF 318: Computer graphics III (5 Credits)
Lecture: Tue, 8-10, Online, Prof. Guthe
Exercises: Thu, 13-14 + 14-15, INF-S110+S112, K. Liu

INF 320: Parallel algorithms (5 Credits)
Lecture: Mon, 8-10, INF-S112, Dr. Korch
Exercises: Wed, 12-14, INF-S112, Dr. Korch

INF 329: Computational Geometry I (5 Credits)
Lecture: Wed, 10-12, INF-S112, Dr. Stehn
Exercises: Tue, 10-12, INF-S112, Dr. Stehn

Section B: Projects

To be achieved: 30 to 31 Credits

Please contact the computer science chairs directly.

Projects in both terms

INF 351: Small Master Project
(Kleines Master-Projekt, 8 Credits)

INF 352: Large Master Project
(Großes Master-Projekt, 15 Credits)

At least one Big Master Seminar needed.

INF 353: Large Master Seminar
(Großes Master-Seminar, 8 Credits)

At most one Big Master Seminar allowed.

Section C: Languages

To be achieved: 15 to 24 Credits

The German language courses are provided by the Language Centre (Sprachenzentrum)
Please see: www.sz.uni-bayreuth.de

German Level A1 has to be achieved within first year.

Section D: Master Thesis

To be achieved: 30 Credits

INF 301: Master Thesis
(Masterarbeit, 30 Credits)

Please contact the computer science chairs directly.

UNIVERSITÄT BAYREUTH

Valid for **summer term 2025** and **winter term 2024/25**

Master's program in Computer Science

www.ai.uni-bayreuth.de/de/studium/master-computer-science/