Welcome to the master’s program in Computer Science!

Total expenditure
Sum of credits to be achieved: 120
Duration: 4 semester resp. 2 years
Degree: Master of Science (M.Sc.)

Start of courses
Winter term (October - March): 16. October 2023
Summer term (April - September): 15. April 2024

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
It is necessary that you register in advance for all courses and 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 2023/24

**INF 212: Theoretical Computer Science II (5 Credits)**
Lecture: Tue, 16-18, INF-S112, Prof. Martens
Exercises: Mon, 12-14, INF-S112, Dr. Niewerth

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

**INF 221: Reinforcement Learning for Scientists & Engineers (5 Credits)**
Lecture: Thu, 13-15, B9,01, PC-Pool, Prof. Faisal
Exercises: Tue, 13-15, B9,01, Dr. Narayan

**INF 223: Graph Processing and Machine Learning (GPML) (5 Credits)**
Lecture: Wed, 10-12, NWII-S74, Prof. Mayer-Martens
Exercises: Wed, 12-13, NWII-S74, N.N.

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

**INF 316: Foundations of Data Management (5 Credits)**
Lecture: Wed, 10-12, INF-S112, Dr. Niewerth
Exercises: Thu, 16-18, INF-S112, Dr. Niewerth

**INF 328: Process Aware Information System**
(Modul: 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

**INF 331: Deep Learning (5 Credits)**
Lecture: To be announced, Prof. Bocklitz
Exercises: To be announced, Prof. Bocklitz

**INF 332: Applied AI for biomedical and biophotonic data**
(Modul: Advanced Information Systems, 5 Credits)
Lecture: To be announced, Prof. Bocklitz
Exercises: To be announced, Prof. Bocklitz

Courses in summer term 2023

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

**INF 218: Programming, Data Analysis and Deep Learning in Python (5 Credits)**
Lecture: Tue, 10-12, INF-H33, Prof. Müller
Exercises: To be announced, Dr. Fleig
INF 219: Intelligent User Interfaces (5 Credits)
Lecture: Tue, 14-16, GEO-H6, Prof. Buschek
Exercises: To be announced, Prof. Buschek

INF 222: Event Processing (5 Credits)
Lecture: Wed, 14-17, INF-S112, Prof. Mayer
Exercises: Wed, 17-18, INF-S112, Prof. Mayer

INF 305: High Performance Computing (8 LP)
Lecture: Mon, 8-10, INF-H34, Prof. Rauber
Thu, 10-12, INF-H34, Prof. Rauber
Exercises: Fri, 12-14, INF-H34, J. Seiferth

INF 307: Data Analysis II
(Modul: Data Analytics, 8 Credits)
Lecture: Mon, 12-14, INF-H34, Prof. Jablonski/Dr. Ackermann
Exercises: Tue, 8-10, INF-H34, Dr. Ackermann
For INF 307 (Data Analytics) both parts (Data Analysis I and Data Analysis II) are necessary

INF 315: Robotics II (5 Credits)
Lecture: Thu, 14-16, INF-H34, Prof. Henrich

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

INF 321: Foundations of Semi-structured Data
(5 Credits)
Lecture: Mon, 16-18, INF-S112, Prof. Martens
Exercises: Wed, 16-17, INF-S110, Prof. Martens

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.