



## 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): 17. April 2023

### 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/cmllife/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 2022/23

### INF 212: Theoretical Computer Science II

(Theoretische Informatik II, 5 Credits)

Lecture: Tue, 16-18, INF-S112, Prof. Martens

Exercises: Mon, 12-14, INF-S112, Dr. Niewerth

### INF 221: Reinforcement Learning for Scientists & Engineers, 5 Credits

Lecture: Tue, 14-16, INF-2.01, Prof. Faisal

Exercises: Tue, 16-18, RWI-S56, R. Mio Zaldivar)

### INF 307: Data Analysis I

(Modul: Data Analytics, 8 Credits)

Lecture: Tue, 12-14, INF-H34, Prof. Jablonski

Exercises: To be announced

### INF 316: Pattern recognition

(Mustererkennung, 5 Credits)

Lecture: Thu, 14-16, INF-S110, Prof. Henrich

Exercises: Fri, 13-14, INF-S110, J. Hartwig

### INF 326: Foundations of Data Management

(Foundations of Data Management, 5 Credits)

Lecture: Thu, 10-12, INF-S112, Prof. Martens

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, Prof. Jablonski

Exercises: To be announced



### INF 330: Computational Geometry II

(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 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

(Programmieren und Datenanalyse 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  
 (Robotik II, 5 Credits)  
 Lecture: Thu, 14-16, INF-H34, Prof. Henrich

INF 320: Parallel algorithms  
 (Parallele Algorithmen, 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  
 (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  
 (Computational Geometry II, 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](http://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.



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Valid for **summer term 2023** and **winter term 2022/23**

## Master's program in Computer Science



[www.ai.uni-bayreuth.de/de/studium/master-computer-science/](http://www.ai.uni-bayreuth.de/de/studium/master-computer-science/)