Welcome to Freie Universität Berlin

Mathematics (M.Sc.)
Winter semester 2021/22
Studying during the Covid-19 pandemic (winter term 2021/22)

● The winter term 2021/22 will take place in presence for the most part. Please note that the **3G rule** applies. ([https://www.mi.fu-berlin.de/en/stud/beratungszentrum/erstsemester/verhalten.html](https://www.mi.fu-berlin.de/en/stud/beratungszentrum/erstsemester/verhalten.html))

● On campus: Please check in with the **a.nwesen.de QR code** at your seat.

● Some events might be hybrid/online. Yet, students are not entitled to study completely online. Presence on campus might be required.


**Goodwill and creativity!**
Student Advisory Center

Students advising students
- Student advisory service
- International Counseling
- Mentoring
- EinS@FU-Mentoring

Student Advisory Center/Studentisches Beratungszentrum
Arnimallee 3 / Room 023
Student Counseling

Isa Adriane Günther

I can help you with …

• planning and organizing your studies
• understanding the study regulations
• module registration
• questions about the exam procedure
• questions about your thesis
• counseling for international students

and much more!

E-Mail: studienberatung@math.fu-berlin.de
International Counseling

Verena Deege

I can help you with …

• counseling for international students
• organizing your studies as an international student
• planning a semester abroad
• module registration in English

and much more!

E-Mail: verena.deege@fu-berlin.de
Chairman of MSc Mathematics

Prof. Dr. Klaus Altmann
Professor for mathematics at Freie Universität Berlin
Chairman of mathematics master’s program

He can help you with …

• the recognition of courses and credits at FU and other universities, e.g. concerning complementary modules
• understanding the study regulations

E-Mail: altmann@math.fu-berlin.de
http://www.math.fu-berlin.de/altmann/
Mathematics at FU Berlin

- 19 professors, 18 private lecturers
- 33 working groups

The mathematics master’s program at Freie Universität especially profits from the following top research areas:

- Algebra, Analysis, Geometry, Number Theory and Topology
- Scientific Computing and Bioinformatics
- Discrete Mathematics and Algorithms
Mathematics Master’s Program

- **Standard period of study:** 4 **semesters** (= 2 years)
  - It is possible to study longer than 4 semesters.
  - Winter term 2021/22: October – March lectures: October – February
  - Summer term 2022: April – September lectures: April – July

- Complete 120 LP to obtain master’s degree
  - about 30 credit points per semester

- Final grade is weighted according to the LP:
  1/3 master’s thesis and 2/3 exams and seminar grades
What are LP?

• LP/Credit points/ECTS
• 1 LP ≈ 30 hours of work
  • preparation
  • attendance
  • exercises
• Earn LP by successfully completing modules

• Module example:
  ✓ Lecture: - exam
  ✓ Tutorials: - regular and active participation
    - a total of 50% of the points on weekly exercise sheets
What are LP (ECTS)?

- Take about 30 LP per semester (less is possible)
- For a course/module with two lectures a week, you usually get 10 LP
- Most courses are structured like this

=> choose about 3 modules per semester
The courses are taught in…

English

(and sometimes in German.)
Which modules can I take?

• Current Offer: Course Catalog: (www.fu-berlin.de/vv/en/fb)

• General Offer: Study and Examination Regulations (www.mi.fu-berlin.de/en/math/stud/mathemaster/index.html)

Which modules do I have to take?

• Study and Examination Regulations (www.mi.fu-berlin.de/en/math/stud/mathemaster/index.html)
## Structure of the Master’s Program

<table>
<thead>
<tr>
<th>Basic Modules</th>
<th>Intermediate and Advanced Modules</th>
<th>Supplemental Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>5* 10 LP = 50 LP</td>
<td>5 + 5 = 10 LP</td>
<td>30 LP</td>
</tr>
<tr>
<td>Algebra I</td>
<td>Algebra II</td>
<td><strong>Aufbaumodul:</strong> Part III</td>
</tr>
<tr>
<td>Differential Geometry I</td>
<td>Differential Geometry II</td>
<td><strong>Ausgewählte Themen A, B, C:</strong> (10 LP)</td>
</tr>
<tr>
<td>Discrete Geometry I</td>
<td>Discrete Geometry II</td>
<td><strong>Spezielle Aspekte A, B, C:</strong> (5 LP)</td>
</tr>
<tr>
<td>Discrete Mathematics I</td>
<td>Discrete Mathematics II</td>
<td><strong>Aktuelle Forschungsthemen A, B, C:</strong> (5 LP)</td>
</tr>
<tr>
<td>Dynamical Systems I</td>
<td>Dynamical Systems II</td>
<td><strong>Vertiefungsmodul:</strong> Seminar</td>
</tr>
<tr>
<td>Numerics II</td>
<td>Numerics III</td>
<td><strong>Spezielle Forschungsaspekte:</strong> (5 LP)</td>
</tr>
<tr>
<td>Partial Differential Equations I</td>
<td>Partial Differential Equations II</td>
<td><strong>Forschungsprojekt:</strong> (10 LP)</td>
</tr>
<tr>
<td>Stochastics II</td>
<td>Stochastics III</td>
<td></td>
</tr>
<tr>
<td>Topology I</td>
<td>Topology II</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Stochastics II:</strong> Stochastics III</td>
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<tr>
<td></td>
<td></td>
<td><strong>Topology I:</strong> Topology II</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Number Theory II</strong></td>
</tr>
<tr>
<td><strong>Master’s Thesis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 LP</td>
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</tbody>
</table>
In which order should I choose these modules?

- First modules with lower number (an advice not a law): take Algebra I before you take Algebra II.

- For some modules prior knowledge requirements are listed in course description.

- Complete 60 LP before you start your master’s thesis.

- In order to take an advanced module, you need to have completed the corresponding basic and intermediate module
  - Algebra I/II + Algebra III => Master’s seminar Algebra (Algebra IV)
For your first semester (winter term 2021/22):

• For example, basic modules you could take are:
  • Algebra I
  • Differential Geometry I
  • Discrete Geometry I
  • Numerical Analysis II

• Depending on your prior knowledge, you can already take basic modules with a higher number, intermediate and supplemental classes.
• It is possible to take classes (Nebenhörerschaft) at TU Berlin and HU Berlin.
# Exemplary Study Plan

<table>
<thead>
<tr>
<th>Basic Modules</th>
<th>Intermediate + Advanced Modules</th>
<th>Supplemental Modules</th>
<th>LP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Algebra I</strong></td>
<td>10 LP</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>10 LP</td>
<td><strong>Discrete Geometry I</strong></td>
<td>10 LP</td>
<td></td>
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<tr>
<td></td>
<td>10 LP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Numerics II</strong></td>
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<tr>
<td></td>
<td>10 LP</td>
<td></td>
<td></td>
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<tr>
<td><strong>Stochastics II</strong></td>
<td>10 LP</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>10 LP</td>
<td><strong>Discrete Geometry II</strong></td>
<td>10 LP</td>
<td></td>
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<tr>
<td></td>
<td>10 LP</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>Discrete Geometry III</strong></td>
<td>5 LP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 LP</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>Master-seminar Discrete Geometry</strong></td>
<td>5 LP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 LP</td>
<td></td>
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<tr>
<td></td>
<td><strong>modules of your choice</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>30 LP</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Master's Thesis (in Discrete Geometry)</strong></td>
<td>30 LP</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

**Total Credits:** 30 LP
Exams

- Especially for your basic modules, there are mostly written exams.
- **First exam** at the end of lecture time: mid-/end- February
- **Second exam** before beginning of new semester: ~ beginning of April
- For written exams: If you decide to take the **first and second exam**, the better grade counts.
- A total of **4 attempts** to pass a course. (At the math department not attending does not count as an attempt)
- No special **registration for the exam** required. (unless your teacher tells you otherwise)
- **Grading System:**
  1,0  1,3  1,7  2,0  2,3  2,7  3,0  3,3  3,7  4,0  5,0
To Do

▸ **Modules:**
  ▸ Register on Campus management (for your grades and diploma)
  ▸ Register on Whiteboard (for all class material and information)

▸ **In general:**
  ▸ Sign up for the department account
Department Account

Why?
➢ Use computers on campus
➢ Use printers on campus
➢ Free Software\(^5\)
➢ Receive department’s e-mails

How?
One-time Login to department’s portal\(^6\) with ZEDAT-account.

Important: Please read your e-mails; you can automatically forward them to your primary e-mail address.

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5 https://www.zedat.fu-berlin.de/Benutzerservice/Software
6 https://portal.mi.fu-berlin.de
Thank you for joining the Welcome Event (MSc Mathematics)!

Are there still any questions?
- On campus: Please feel free to ask your questions now!
- Webex: After answering all questions by people on campus, we will check the Webex chat box for questions.

Good luck with your studies!