Dear student,

Welcome to Göttingen and to our Master's degree course in mathematics. During your studies here in Germany you will most likely come across many tasks you have to solve for the first time – both in mathematics and the organisation of your university and private life.

One of the first tasks will probably be choosing courses for your first semester in Göttingen. The structure of our degree programme and the way of setting up a schedule might differ a lot from what you know from your Bachelor's degree.

We would like to help you in this matter with the following information. We know that it is a lot of information at once. So please take your time reading it and feel free to ask questions at any point.

We wish you a fruitful and successful stay here in Göttingen.

Best regards,

Study Office Mathematics

I. Choosing courses for your Master's degree in mathematics

Each student is responsible for putting his or her own schedule together for each semester. This opens up a lot of freedom and provides many options. We would like to assist you the best we can. Please feel free to contact us regarding any uncertainties. Below you will find an overview of the possible choices and the steps to set up your study plan. The legally binding examinations regulations can be found here: https://www.uni-goettingen.de/en/43025.html

a) Please choose a study track:

General (details in V.)	**Physics (details in VI.)**	**Mathematical Data Science (details in VII.)**
- You have the greatest freedom of choice in this track in comparison to the other tracks. - It will be compulsory for you to take courses from at least 3 of the 4 mathematical fields of study (see b) - All 4 fields of study(see b) are possible specializing in.	- The focus of mathematical courses lies in mathematical physics. - As minor subject courses, only physics courses are possible. - More physics courses are possible in comparison to the standard minor subject in the general track.	- The focus of mathematics courses lies in SP 3 and SP 4.(see b) - Only the fields of study SP 3 or SP 4 are possible choices for specialising. - As minor subject courses only computer science is possible. More minor subject courses are possible in comparison to the standard minor subject in the general track.

b) These are the 4 fields of study that you can choose as your specialisation in your Master's degree, this means that you write your Master's thesis in this field. We strongly recommend that you choose the majority of courses in the field of study you want to choose as your specialisation. (For details, see III.)

SP 1 Analysis, geometry, topology	SP 2 Algebra, geometry, number theory	SP 3 Numerical and applied mathematics	SP 4 Mathematical stochastics

You do not need to decide right away which one you would like to choose. However, it is good to keep in mind which one suits you best.

c) Please choose a minor subject: (For details, see IV.)

Astrophysics	Physics	Chemistry	Computer science
Philosophy	Economics	Business administration	

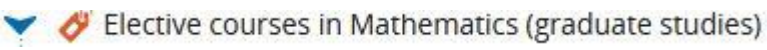
d) Depending on your choices from a), b) and c) set up a study plan:

During your studies, you earn credits (C) for each passed exam. Exams always belong to modules. The module descriptions contain all information about content, competencies, form of examination and number of credits earned by passing the exam. You need to achieve 120 C for the whole programme, of which 30 C are gained by successfully writing your thesis. If you want to finish your degree in 2 years, you should choose an average of 30 C per semester. You are allowed to achieve for example less than 30 C in one semester and then more than 30 C in another.

For each semester you will find a list of all courses belonging to modules from the Master's degree programme in the online university course catalog, including time, place, lecturer, modules and respective credits, examination dates and so on. The online university course catalog can be used without any university login data. It is part of the ecampus: https://ecampus.uni-goettingen.de. Go there and look around to test all the information and clicks it offers. You can change the language to English on the bottom right of the page.

Please read these short instructions for navigating in the catalog: Navigation Instructions before you go to the direct link to course catalog **(Please check whether the correct term is selected before you start browsing the classes!)**

There you follow this path:
Faculty of Mathematics and Computer Science -> Mathematics -> Mathematik (Master of Science)

If you now click on the symbol  on the right side after the words  a long list of our modules opens. You can identify those modules offered in the respective semester as those modules that have the symbol  in one of their rows. The other modules are not offered in the respective semester.

Our courses come in different types. Here is a short explanation, what the different types mean:

Lecture/Lecture course	Exercises/Exercise session	Seminar	Oberseminar/Advanced Seminar	Practical course
Mostly the lecturer talks. (But normally you are allowed/invited to ask questions!) In most cases attending an "exercise session" is compulsory together with a "lecture course".	Problem session: The weekly assignments are discussed. In most of our lectures, you need to hand in 50 % correct solutions to these to be admitted to the final exam.	Students prepare and give talks to other students. The topics of the talks are assigned by the instructor.	Special kind of a seminar: These are mostly working group seminars that you only join as soon as you write your thesis in that field.	Some sort of lab course, in mathematics it is mostly (mathematical) programming. Often individual projects where the exam normally is written report with the programming and outcome of the programming is explained in detail.

Now you can start choosing your lectures. We recommend choosing them in the following way:

i. First choose introductory modules from the fields of study in mathematics that interest you the most. You are also allowed to choose non-introductory modules if you have the prior knowledge needed for them. We recommend 2 introductory modules that result in 9 credits each.
ii. Choose one module from your minor subject. See IV for details about the courses you can choose here.
iii. Choose one module from key competencies (see VIII.) for example a German language course. (Please note the early registration dates for German classes, see IX.)
iv. Check whether the sum of credits is approximately 30. If (much) lower, choose more from i.,ii. or iii. If (much) higher, delete the module that interests you the least.

IMPORTANT NOTE: It is also possible to join more courses during the first week to decide after the first session(s) which ones you really want to join on a regular basis.

You can salso find a lecture commentar for summer semester 2026 courses here:

https://owncloud.gwdg.de/index.php/s/XH0jOOYx14bPsyP

II. Registering for courses and exams

Together with your student id card you receive an account for the eCampus https://ecampus.uni-goettingen.de

Here you find online tools for organizing your studies in Göttingen. You need to register for courses and exams there for example. You should also check the student e-mails you receive here regularly. For more information about your E-Mail account and how to use it, see here: https://wiki.student.uni-goettingen.de/en/support/email/start

Please register for the courses you would like to take:

a. **In Stud.IP** before the start of the lectures. **Stud.IP** is available in eCampus or at https://www.studip.uni-goettingen.de/

   Stud.IP is an online platform where every student of the university is registered. You have to join all courses you are doing there in order to get access to the course information and material. Exercise sheets, lecture notes and most organisational information concerning the course will be uploaded in the respective course section. You can find screenshots of a good stud.IP search option on pages 12- 16 of this document. Please take a look at this video tutorial: StudIP Video Tutorial

b. **In FlexNow** as soon as you finally decide about the courses you would like to take: **We strongly recommend registering two weeks after the start of the lectures at the latest**, since some registering periods already end three weeks after the courses start. **FlexNow** is available in eCampus or at https://flexnow2.uni-goettingen.de/

   FlexNow is the online platform where you have to register for the exams you want to take. This registration is legally binding:
   - If you don't go to an exam you registered for, this will count as a failed attempt for the corresponding module.
   - If 50%-correct solutions to assignments are part of a module, you always have to register for both: exam (M.Mat...Mp) and "Exercises" (M.Mat…Ue).
   - You cannot participate in an exam if you did not register in FlexNow for the respective exam in time. If you try to register too late, you will not be allowed to sit the exam.
   - You can undo your registration for an exam until 24h before the exam date that is given in FlexNow. If you undid your registration for an exam, not participating in the exam will then not be counted as a failed attempt. If you do not show up in an exam that you are registered for it will be counted as a failed attempt.
   - For most of the modules you have a maximum of three attempts to pass the exam.

   For a video tutorial how to use FlexNow see here:
   FlexNow Video Tutorial
   For any problems concerning FlexNow please contact the examination office, see https://www.uni-goettingen.de/en/497360.html

III. General information on the course structure of mathematics courses in the master's degree programme here in Göttingen

The courses of the Master's programme are organised in a special cycle structure. A lecture cycle normally consists at least of

- Introduction to the cycle ... (is being taught in the winter semester)
- Advances in the cycle ... (is being taught in the ensuing summer semester)
- Specialisation in the cycle ...
- Seminar in the cycle …

Usually 4 cycles start per year. The cycles usually start in winter semester, occasionally they can start in the summer semester. Additionally to the cycles there are lectures and seminars in other mathematical topics.

Important note: The cycle modules are the ones in which you strictly learn necessary content and skills to be prepared to write you master's thesis. We strongly recommend to choose advanced and specialised cycle parts in the field of study you plan to write your thesis in.

The possible cycles and their assignments are:

Cycles in SP 1 **Analysis, geometry, topology**	**Cycles in SP 2** **Algebra, geometry, number theory**	**Cycles in SP 3** **Numerical and applied mathematics**	**Cycles in SP 4** **Mathematical stochastics**
Analytic number theory Analysis of partial differential equations Differential geometry Algebraic topology Mathematical methods in physics	Algebraic geometry Algebraic number theory Algebraic structures Groups, geometry and dynamical systems Non-commutative geometry	Inverse problems Approximation methods Numerics of partial differential equations Optimisation Variational analysis Image and geometry processing Scientific computing / applied mathematics	Applied and mathematical stochastics Stochastic processes Stochastic methods of economathematics Mathematical statistics Statistical modelling and inference Multivariate statistics Statistical foundations of data science
The following master modules can be chosen as well. They belong to the respective study fields but do not belong to any cycle:			
Higher Analysis		Higher Analysis Advanced practical course in scientific computing	Advanced practical course in stochastics (Non-life or Life) insurance mathematics Mathematical statistics

IV. Our minor subjects in detail

You are not allowed to mix these subjects, you have to choose one minor subject and only do modules in this one subject.

Astrophysics (sum up to 18 C) Compulsory: B.Phy.1551: Einführung in die Astrophysik (Only in German) Furthermore all modules B.Phy.55**and M.Phy.55** can be chosen. *Look for these in the elective modules of the "Faculty of Physics" in the online course catalog.*	**Physics (sum up to 18 C)** Every B.Phy.**** and every M.Phy.**** can be chosen except for B.Phy.1301: Rechenmethoden der Physik *Look for these in the elective modules of the "Faculty of Physics" in the online course catalog. The hint about using the search as described below** using* *Organizational unit = " Fakultät für Physik " can be useful as well.*
Chemistry (sum up to 18 C) You can choose from these (mostly German) M.Che.1311: Schwingungsspektroskopie und zwischenmolekulare Dynamik M.Che.1312: Physikalische Chemie der kondensierten Materie M.Che.1313: Elektronische Spektroskopie und Reaktionsdynamik M.Che.1314: Biophysikalische Chemie M.Che.1315: Chemical Dynamics at Surfaces (English) Or all M.Che.**** -modules. B.Che.**** modules can only be taken with the permission of the Faculty of Chemistry only. *Look for these in Fakultät für Chemie->Master-Studiengang "Chemie"->Fachstudium in the online course catalog.*	**Computer Science (sum up to 18 C)** Every B.Inf.**** and every M.Inf.**** can be chosen except for B.Inf.1101 Informatik I, B.Inf.1102 Informatik II, B.Inf.1801 Programmierkurs Furthermore, the following modules can counted: B.Phy.5601: Theoretical and Computational Neuroscience I B.Phy.5602: Theoretical and Computational Neuroscience II B.Phy.5651: Advanced Computational Neuroscience B.Phy.5652: Advanced Computational Neuroscience II B.Phy.5676: Computer Vision and Robotics M.Phy.5601: Seminar Computational Neuroscience/Neuroinformatik *Look for these in the online course catalog in the of the "Faculty of Mathematics and computer Science" - > "Computer Science".* ***Using the search function of the online course catalog with "show all possible search criteria" and then* *Organizational unit = "Institut für Informatik"* *Teaching language = "english"* *can be useful as well.*

Economics (sum up to 18 C)

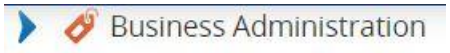
You have to choose three of the modules you see if you click on the arrow

that you reach like this: *Faculty of Mathematics and Computer Science -> Mathematics -> Mathematik (Master of Science)-> Minor subjects in the graduate programme in Mathematics-> Economics*

Not all modules are in English, you find the teaching language in the module description that you find as a link in the “basic data” tab in every module.

Business administration (sum up to 18 C)

You have to choose three of the modules you see if you click on the arrow



that you reach like this: *Faculty of Mathematics and Computer Science -> Mathematics -> Mathematik (Master of Science)-> Minor subjects in the graduate programme in Mathematics-> Business Administration*

Not all modules are in English, you find the teaching language in the module description that you find as a link in the “basic data” tab in every module.

Philosophy (sum up to 18 C) (More details here (only German))

In Philosophy two of the following modules have to be chosen (they are mostly in German)

You have to write a term paper in at least one of them.

B.Phi.01: Basismodul Theoretische Philosophie (9 C, 4 SWS)
B.Phi.02: Basismodul Praktische Philosophie (9 C, 4 SWS)
B.Phi.03: Basismodul Geschichte der Philosophie (9 C, 4 SWS)
B.Phi.05: Aufbaumodul Theoretische Philosophie (10 C, 4 SWS)
B.Phi.06: Aufbaumodul Praktische Philosophie (10 C, 4 SWS)
B.Phi.07: Aufbaumodul Geschichte der Philosophie (10 C, 4 SWS)
B.Phi.18a Vertiefte Bearbeitung philosophischer Themen für HörerInnen aller Fächer (6 C, 2 SWS)
B.Phi.19a Spezielle Themen der Philosophie für HörerInnen aller Fächer (3 C, 2 SWS)

You can only choose the following if you also did the corresponding Bachelor’s module from the above list:

M.Phi.101: Ausgewählte Themen der Theoretischen Philosophie (9 C, 4 SWS)
M.Phi.102: Ausgewählte Themen der Praktischen Philosophie (9 C, 4 SWS)
M.Phi.103: Ausgewählte Themen der Geschichte der Philosophie (9 C, 4 SWS)

Find the Philosophy modules in the course catalogue like this
Faculty of Mathematics and Computer Science -> Mathematics -> Mathematik (Master of Science)-> Minor subjects in the graduate programme in Mathematics-> Philosophy

V. Our General track in detail: You have the largest freedom of choice in comparison with the other tracks.

- Students can write their thesis (30 C) in all fields of study SP 1, SP 2, SP 3 or SP 4 (see III.) One of our minor subjects can be chosen freely (see IV.)

- At least 60 C modules from mathematics have to be passed according to these regulations:

SP 1 or SP 2	**SP 3 or SP 4**	**Choose modules to fill up to 60 C**
At least 12 C of SP 1 or SP 2, thereof at least one seminar or oberseminar module covering at least 3 C. If one of these two is the chosen SP, at least 6 C of the modules of the other SP have to be acquired.	At least 12 C of SP3 or SP 4, thereof at least a seminar or oberseminar module covering at least 3 C. If one of these two is the chosen SP, at least 6 C of the modules of the other SP have to be acquired.	To fill up to 60 C you can choose from: - all modules from SP 1- SP 4

- At least 18 C in one minor subject have to be chosen (see IV.).

- At least 12 C in key competencies have to be chosen, from which at least one module has to be offered by the Faculty of Mathematics and Computer Science. (see VIII.)

Important note: The cycle modules are the ones in which you strictly learn necessary content and skills to be prepared to write you master's thesis. We strongly recommend to choose advanced and specialised cycle parts in the field of study you plan to write your thesis in.

You can find examples of semester plans in the end of the document.

VI. Our Physics track

- Students can write their thesis (30 C) in all fields of study SP 1, SP 2, SP 3 or SP 4 (see III.) and have to choose physics as their minor subject (see IV.).

- 60 C modules from mathematics have to be passed according to these regulations:

SP 1 and SP 2	**SP 3 and SP 4**	**Choose modules to fill up to 60 C**
At least 12 C from the following cycles, including at least one (Ober-) seminar: - Mathematical methods in physics - Analysis of partial differential equations - Differential geometry - Algebraic topology - Non-commutative geometry - Groups, geometry and dynamical systems	At least 12 C of SP 3 or SP 4, thereof at least one seminar or Oberseminar module covering at least 3 C.	To fill up to 60 C you can choose from: - modules from SP 1-4 - up to 12 C from the minor subject physics, (see IV.)

- 18 C from the minor subject physics, (see IV.)

- 12 C in key competencies have to be chosen:

- Thereof at least one key competencies module of the Faculty of Physics OR one key competencies module of the mathematics, see VIII.

Important note: The cycle modules are the ones in which you strictly learn necessary content and skills to be prepared to write you master's thesis. We strongly recommend to choose advanced and specialised cycle parts in the field of study you plan to write your thesis in.

You can find examples of semester plans in the end of the document.

VII. Our Mathematical Data Science (MDS) track

- Students have to write their thesis in SP 3 or SP 4 and have to choose Computer Science as their minor subject.

- 60 C modules from mathematics have to be passed according to these regulations:

SP 3	**SP 4**	**Practical course**	**Computer Science**	**Choose modules to fill up to 60 C**
At least 12 C from these modules including at least one Seminar or advanced seminar: B.Mat.3X31, B.Mat.3X34, B.Mat.3X37, B.Mat.3X38, B.Mat.3X39, where X is an element of {1,3} M.Mat.4Y31, M.Mat.4Y34, M.Mat.4Y37, M.Mat.4Y38, M.Mat.4Y39, where Y is an element of {5,6,7,8,9} For Seminars or advanced seminars Y is an element of {8,9}	At least 12 C from these modules including at least one Seminar or advanced seminar: B.Mat.3X41, B.Mat.3X45, B.Mat.3X46, B.Mat.3X47, where X is an element of {1,3} M.Mat.4Y41, M.Mat.4Y45, M.Mat.4Y46, M.Mat.4Y47, where Y is an element of {5,6,7,8,9} For Seminars or advanced seminars Y is an element of {8,9}	One of these modules for 10 C : - M.Mat.0731: Advanced practical course in scientific computing - M.Mat.0741: Advanced practical course in stochastics	You have to choose one of the modules you see if you navigate like this I the online course catalogue: *Mathematik (Master of Science)-> Study tracks in the Master's Degree programme in Mathematics (M.Sc.)-> Study track MDS "Mathematical Data Science"->Elective compulsory modules in Mathematics (60 C)-> Computer science*	To fill up to 60 C you can choose from: - modules from SP 1-4 - up to 12 C from computer science modules of the minor subject computer science, see IV.,

- 18 C in the minor subject Computer Science have to be chosen. All Computer Science modules from the master's degree programme in mathematics are allowed, see IV., but the ones in "*Elective compulsory modules in Mathematics (60 C)-> Computer science*" (see above) are recommended.

- 12 C in key competencies have to be chosen, from which at least one has to be offered by the Faculty of Mathematics and Computer Science, see VIII.

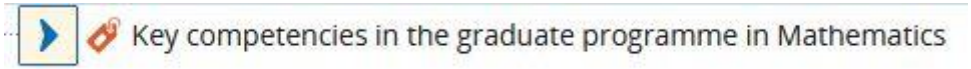
Important note: The cycle modules are the ones in which you strictly learn necessary content and skills to be prepared to write you master's thesis. We strongly recommend to choose advanced and specialised (second digit of the module number is 3 or 5) cycle parts in the field of study you plan to write your thesis in.

You can find examples of semester plans in the end of the document.

VIII. **Key competencies**

In Göttingen, interdisciplinary and/or job oriented qualifications are called key competencies. Among others, foreign languages, method, self and social competencies are part of this. You can for example choose a German course, see below.

The key competencies that are offered by the department of mathematics can be found by clicking on this arrow in the online catalog:



General information about key competencies as well as a catalogue of all cross-faculty key competency modules can be found here:

Search all key competencies: https://www.uni-goettingen.de/de/196175.html Search only the English ones: https://www.uni-goettingen.de/en/605983.html

Some special key competencies option especially for international students can be found here: https://uni-goettingen.de/en/691122.html

IX. **General information about German classes**

- It is obligatory to take a placement test in the German language before you can register for a German class. The placement test can be taken (approximately from the end of) August or February. It always takes place in the ZESS Goßlerstraße 10.
- Only if you have no knowledge of German whatsoever, you do not need to take the test. In this case, please register directly in an A 1.1 (Grundstufe 1) level-course.
- Registration for all German classes (A1.1. or higher with a respective placement test) is done in Stud.IP **(see also II.)**
- Usually the registration is open from the first week of the lecture period from Monday on. You have to be very quick to get a slot in the course!
- The courses usually begin in the second week of the lecture period.
- But please always check on these dates yourself. Current dates for the recent semester and more information on the placement test can be found here:

  http://www.uni-goettingen.de/en/semester-program-for-german-courses/114195.html

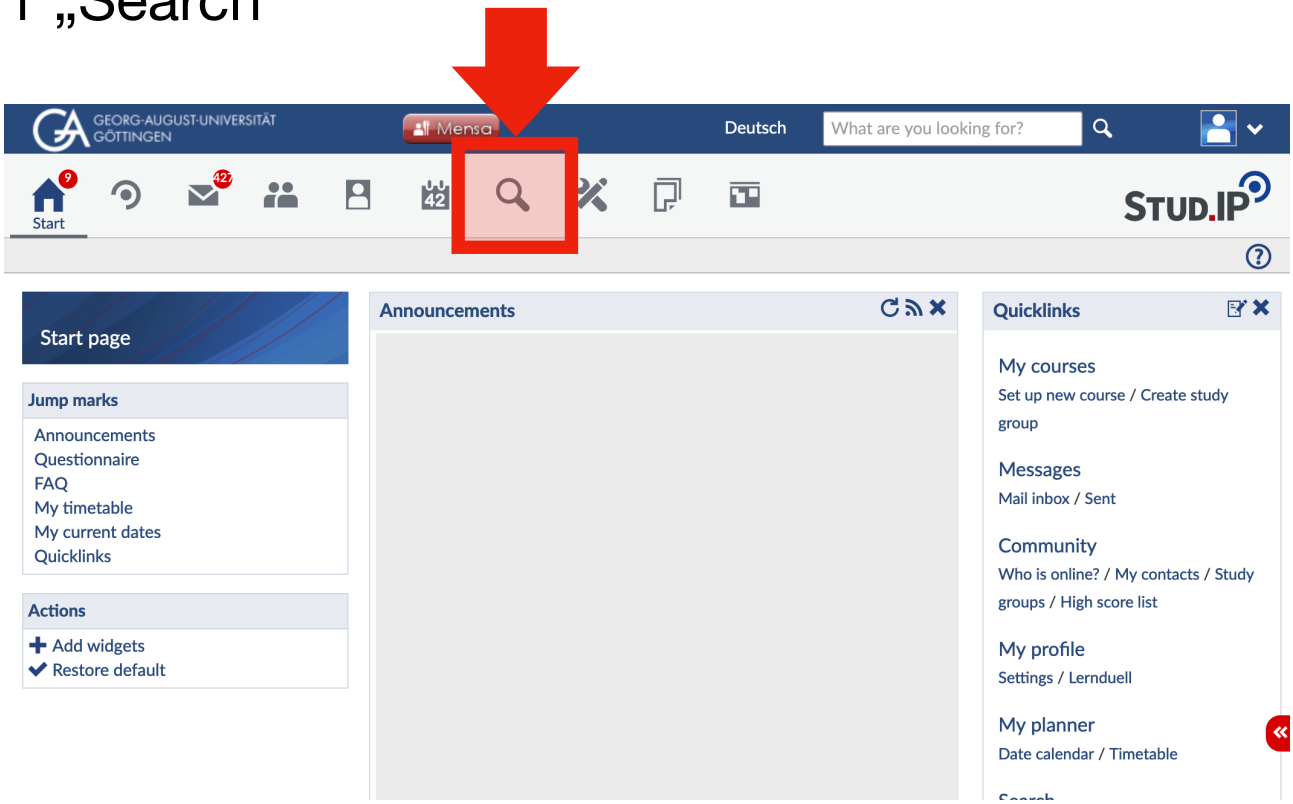
Modul directory (Master of Science Mathematik)

Link

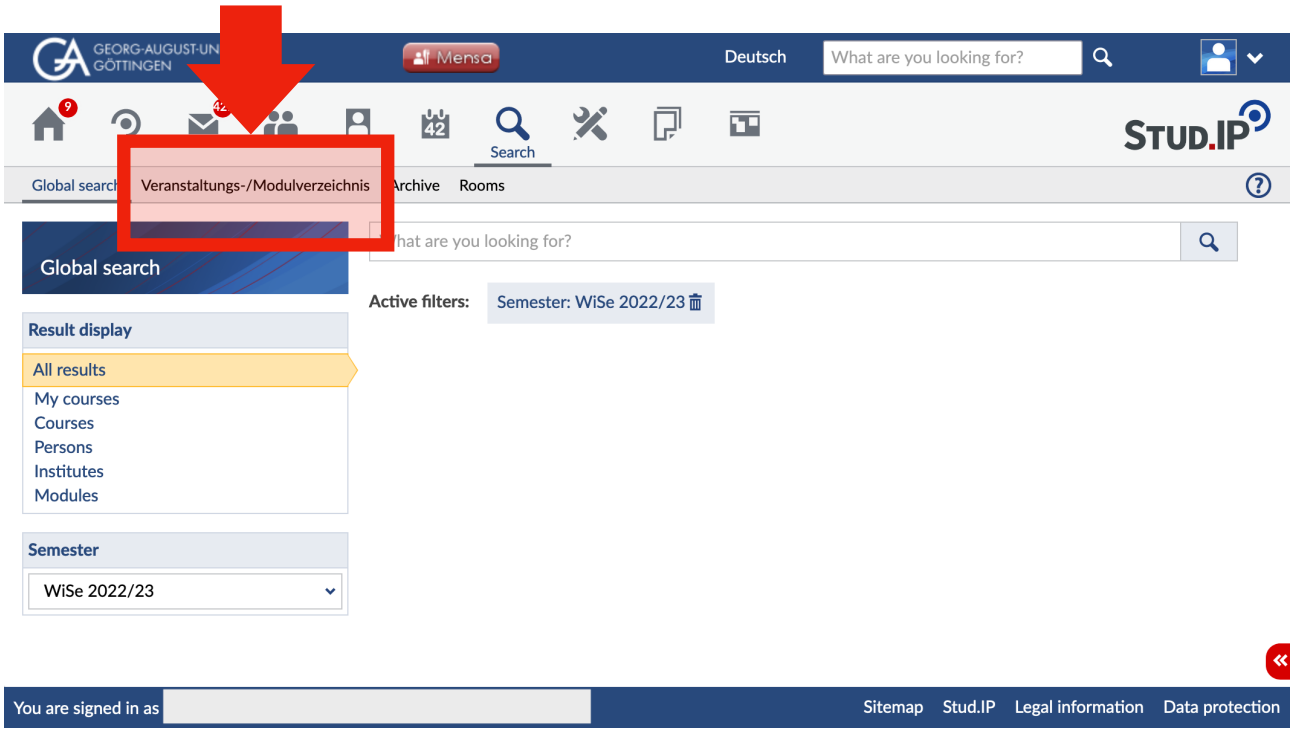
https://studip.uni-goettingen.de/dispatch.php/search/stgtable/studiengang/9e15e069b2368c43ec4fc64c16f9530f?with_courses=1

Screen

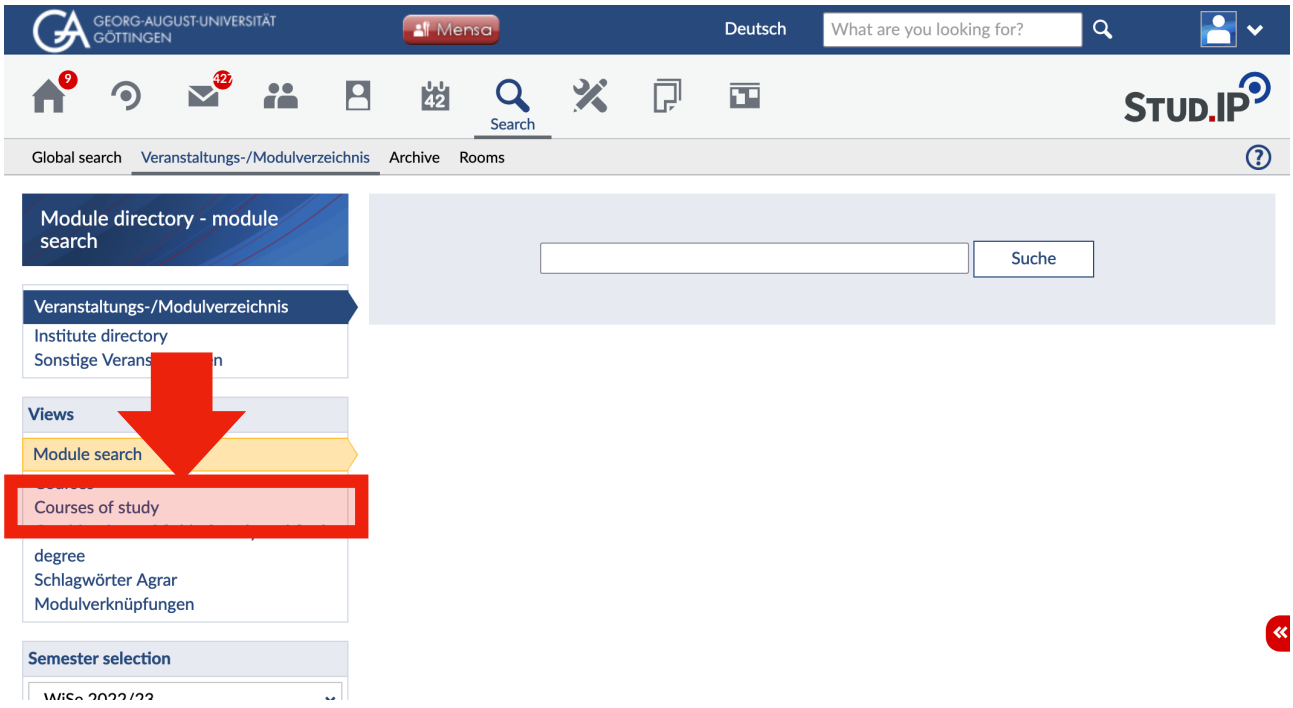
1 „Search“



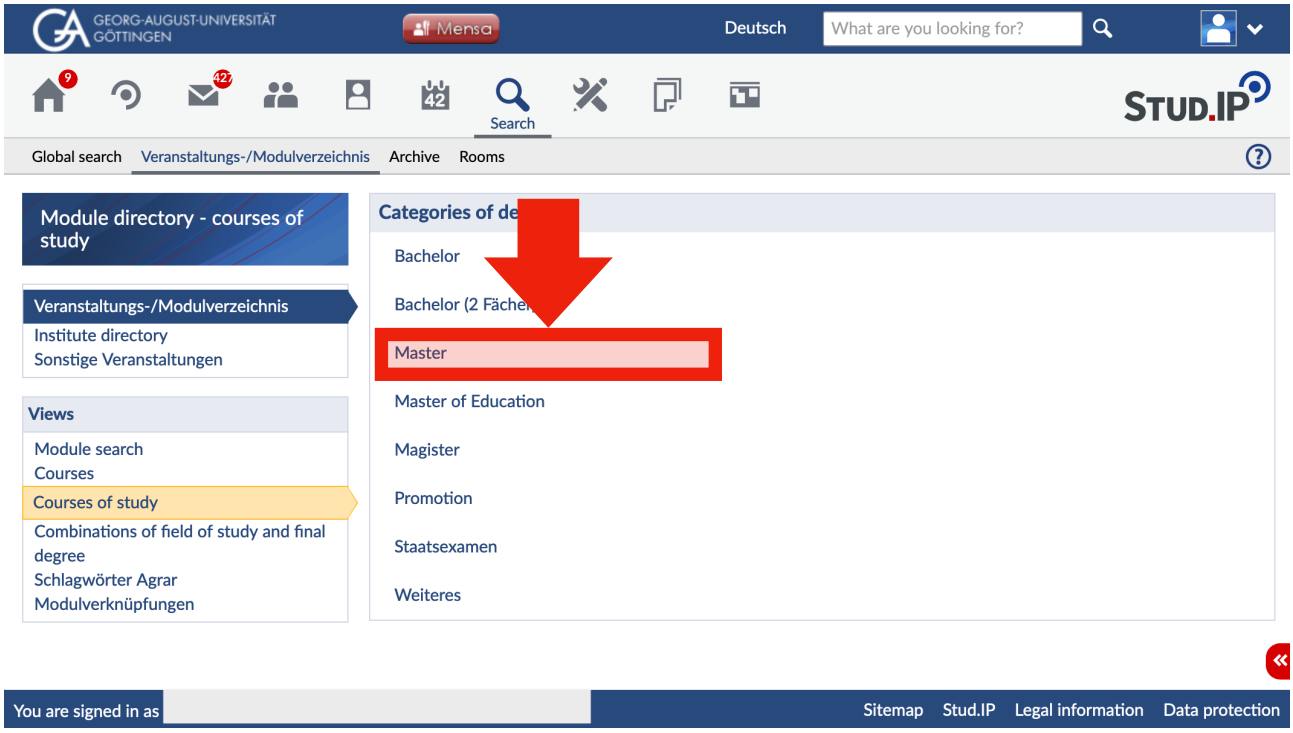
2 „Veranstaltungs-/Modulverzeichnis“



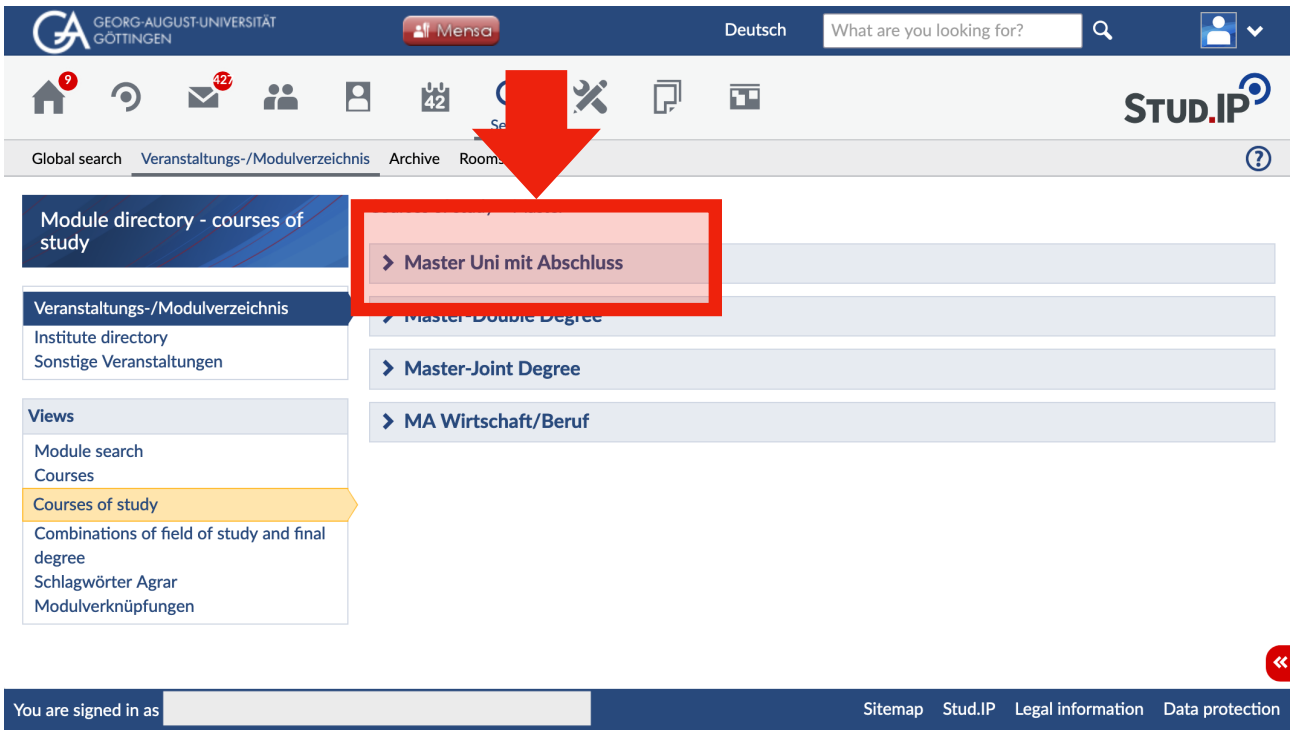
3 „Course of study“



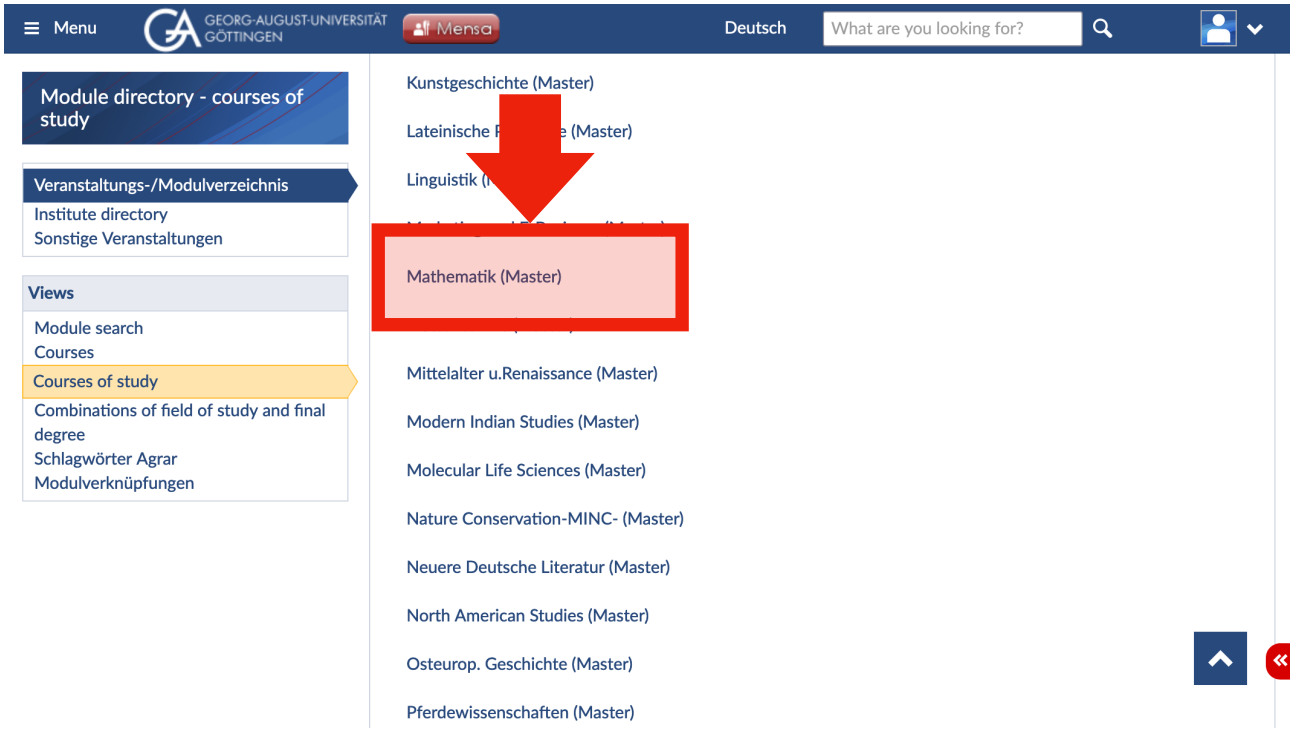
4 „Master“



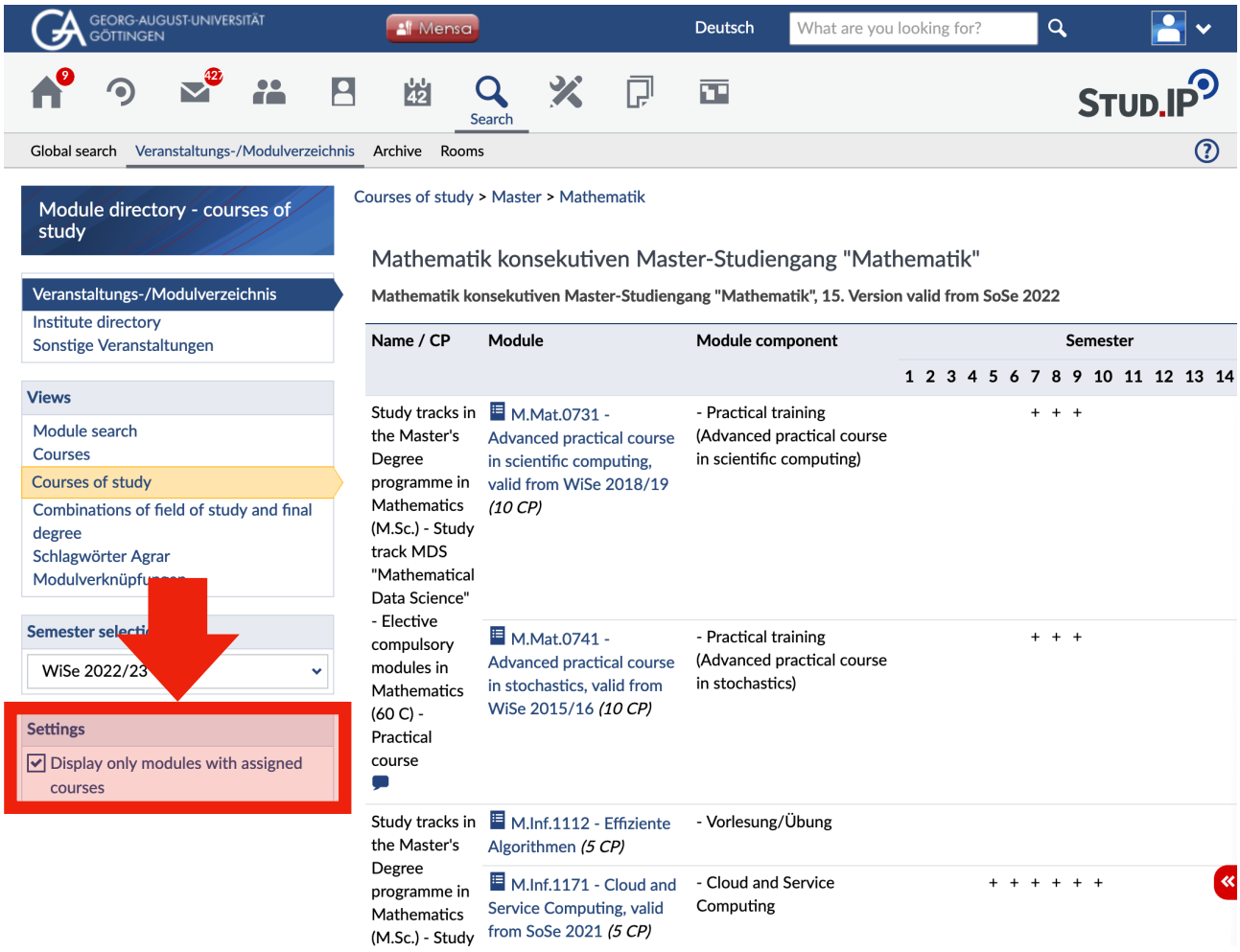
5 „Master Uni mit Abschluss“



6 „Mathematik (Master)“



7 „Display only modules with assigned courses“



Appendix II: Exemplary curricula

1) Full-time studies: Profile F with focus 2, minor subject “Economics”

<table>
<tr><th>Sem
Σ C*</th><th colspan="3">Mathematics (60 C)</th><th>Minor subject “Economics”
(18 C)</th><th>Key competencies
(12 C)</th><th>Master’s thesis
(30 C)</th></tr>
<tr><td>1
Σ 30 C</td><td>B.Mat.3114
Introduction to algebraic topology
9 C</td><td>B.Mat.3125
Introduction to non-commutative geometry
9 C</td><td>M.Mat.4834
Seminar on optimisation
3 C</td><td>B.WIWI-VWL.0006
Growth and development
6 C</td><td>B.Mat.0922
Mathematics information services and electronic
publishing
3 C</td><td></td></tr>
<tr><td>2.
Σ 30 C</td><td colspan="2">B.Mat.3314
Advances in algebraic topology
9 C</td><td>B.Mat.3325
Advances in non-commutative geometry
9 C</td><td>B.WIWI-VWL.0008
Money and International Finance
6 C</td><td>B.Inf.908
General programming practical course
6 C</td><td></td></tr>
<tr><td>3.
Σ 30 C</td><td>M.Mat.4825
Seminar on non-commutative geometry
3 C</td><td>M.Mat.3140
Mathematical statistics
9 C</td><td>M.Mat.4525
Specialisation in non-commutative geometry
9 C</td><td>B.WIWI-VWL.0007
Introduction to Econometrics
6 C</td><td>B.Mat.0932
Communicating mathematical topics to a professional audience
3 C</td><td></td></tr>
<tr><td>4.
Σ 30 C</td><td colspan="3"></td><td></td><td></td><td>Master’s thesis in SP 2
30 C</td></tr>
<tr><td>Σ120 C</td><td colspan="3">60 C</td><td>18 C</td><td>12 C</td><td>30 C</td></tr>
</table>

2) Full-time studies: Profile Phy with focus 1, minor subject “Physics”

Sem **Σ C***	**Mathematics (60 C)**			**Minor subject “Physics” (18 C)**	**Key competencies (12 C)**	**Master’s thesis (30 C)**
1 **Σ 30 C**	B.Mat.3114 Introduction to algebraic topology 9 C	B.Mat.3125 Introduction to non-commutative geometry 9 C	M.Mat.4834 Seminar on optimisation 3 C	B.Phy.5506 Introduction to fluid dynamics 6 C	B.Mat.0922 Mathematics information services and electronic Publishing 3 C	
2. **Σ 30 C**	B.Mat.3314 Advances in algebraic topology" 9 C	B.Mat.3325 Advances in non-commutative geometry 9 C		B.Phy.5523 General Relativity 6 C	B.Phy.606 Electronic Lab Course for Natural Scientists 6 C	
3. **Σ 30 C**	M.Mat.4914: Advanced seminar on algebraic topology 3 C	M.Mat.3140 Mathematical statistics 9 C	M.Mat.4514 Specialisation in algebraic topology 9 C	B.Phy.5501 Aerodynamics 6 C	B.Mat.0932 Communicating mathematical topics to a professional audience 3 C	
4. **Σ 30 C**						Master’s thesis in SP 1 30 C
Σ120 C	**60 C**			**18 C**	**12 C**	**30 C**

3) Full time studies: Profile MDS with focus 4, minor subject “Computer Science”

Sem Σ C*	**Subject specific degree programme (60 C)**				**Minor subject “Computer Science” (18 C)**	**Key competencies (12 C)**	**Master’s thesis (30 C)**
1. Σ 30 C	M.Mat.3130 Operations research 9 C		B.Mat.3147 Introduction to statistical foundations of data science 9 C		M.Inf.1232 Parallel Computing 6 C	SK.FS.EN-FW-C1-1 Business English I – C1.1 6 C	
2. Σ 30 C	B.Mat.3334 Advances in optimisation 9 C		M.Mat.4847 Seminar on statistical foundations of data science 3 C	B.Mat.3337 Advances in statistical foundations of data science 9 C	M.Inf.1808 Practical Course on Parallel Computing 6 C	B.Mat.0922 Mathematics Information Services and electronic publishing 3 C	
3. Σ 30 C	M.Mat. 4834 Seminar on optimisation 3 C	M.Inf.1151 Vertiefung Software-technik: Data Science und Big Data Analytics 5 C	M.Mat.4947 Advanced seminar on statistical foundations of data science 3 C	M.Mat.0741 Advanced practical course in stochastics 10 C	M.Inf.1281 NOSQL Databases 6 C	B.Mat.0940 The mathematical nature of the world we are living in 3 C	
4. Σ 30 C							Master’s thesis in SP 4 30 C
Σ120 C	**60 C**				**18 C**	**12 C**	**30 C**