



Marburg
University

Introduction Master Study Programs: Informatics, Data Science, Business Informatics, Mathematics and Business Mathematics

Winter Semester 2025/26
Department of Mathematics and Computer Science

Prof. Christoph Bockisch
Studiendekan



this presentation is recorded

Study Advice

The department's study advisors are happy to help you individually:



Prof. Welker
(**Mathematics**)



Prof. Holzmann
(**Business Mathematics**)



Prof. Bockisch
(**Computer Science**)

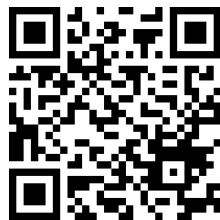


Prof. Tischhauser
(**Business Informatics**)



Prof. Seifert
(**Data Science**)

Further information and services:
<https://uni-marburg.de/Y8Kj31>



Studying with special needs
<https://uni-marburg.de/LI9YDB>





Emails

- Use your @students email address!
 - You may receive important announcements via this address.
 - Personal information can only be provided to this address.
- Protect this address and do not share access to it.



Important: Degree Program and Examination Regulations

Read it!



Colourbox.de / #19879598

- German website with the examination regulations: <https://uni-marburg.de/Zb2vX0>
- Only German versions are legally binding, but there are translations

Data Science	https://uni-marburg.de/GQul61
Computer Science	https://uni-marburg.de/o44zTG
Business Informatics	https://uni-marburg.de/0UhRDO
Business Mathematics	https://uni-marburg.de/ZAkOBe
Mathematics	https://uni-marburg.de/9fMEZ9

Note: These are not the most up-to-date examination regulations for the degree programs. The most recent ones have not yet been translated.. However, they only differ in the admission requirements, which are no longer relevant for you.





Modules...

- ...are thematically and temporally delimited learning units – **“building blocks of study”**.
- ...usually extend over one semester.
- ...are made up of one or more different courses, e.g. lecture and recitation class, seminar, practical course.
- ...comprise coursework, e.g. exercises, software development.
- ...are completed with examinations, e.g. written examination, oral examination, presentation, written report.
- ...earn you credit points (CP) after successful completion.
- ...earn different amounts of CP depending on their scope and workload
- ... 1 credit point is considered to be equivalent to 30 hours study effort





Modules...

- ...are thematically and temporally delimited learning units – **“building blocks of study”**.
- ...usually extend over one semester.
- ...are made up of one or more didactic units: lecture, seminar, and recitation class, seminar, practical exercise, etc.
- ...comprise coursework, e.g. exercises, projects, presentations, etc.
- ...are completed with examination: oral examination, presentation, written report.
- ...earn you credit points after successful completion.
- ...earn different credit points depending on their scope and workload.
- ...1 credit point is equivalent to 30 hours of study effort.

Once you registered for the exam in an (elective) module, you are locked in to it and must complete it.

Switching an elective module is only possible after you permanently failed the first one. This MAY ONLY happen twice!



Rules / Constraints for Study Programs

- When in doubt, refer to examination regulations
 - Only German version is legally binding
 - But the German web page also links to translations:
<https://uni-marburg.de/Zb2vX0>
- Readable description of programs on department web page:
<https://www.uni-marburg.de/en/fb12/studying/degree-programs>
- Select your study program under “Master Degrees”
 - In this presentation **“Computer Science”** is chosen exemplarily
 - Some specialities of other programs are highlighted
 - Ask if you have questions specific to other programs!
- Most important for active students: “Study Structure”



Rules / Constraints for Study Programs

- Study Composition
 - Different study areas with requirements
 - The area “Profile Area Modules” is optional
 - When chosen: must complete 12 credits from **one profile area**
 - Profile Area modules may only be available in German
 - In “Practical and Seminar Modules” you **must pick one** seminar and optionally **may pick a second** seminar
 - In the “Compulsory Electives”
 - Pick depending on the optional choices:
 - 51 credits – if you choose a **profile area** and **two** seminars
 - 54 credits – if you choose a **profile area** and **one** seminar
 - 63 credits – if you choose **no profile area** and **two** seminars
 - 66 credits – if you choose **no profile area** and **one** seminar
 - At least one module each from theoretical and practical CS (specific to only this study program)
 - At most 18 credits from “advanced modules”

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 - 66 credits – if you choose **no profile area** and **one** seminar
- At least one module each from theoretical and practical CS (specific to only this study program)
- At most 18 credits from “advanced modules”

When you start a profile area, you are locked in to it and must complete it. Check upfront, if this will be possible for you.

Rules / Constraints for Study Programs

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Refers to level of module. “Advanced” in general indicates belonging to Bachelor program for (compulsory elective) modules of the department. CE modules belonging to a Master program, generally have level “Specialization”.

Rules / Constraints for Study Programs

- Study Composition

- Similar for other study programs; main differences:

- Optional “Application Area” with 18-24 credits
 - Also up to two seminars (pay attention to maximum credits in area)

(DS) 

- Up to two seminars
 - Up to 9 credits in Mathematics modules
(including a maths module is recommended)
 - (At least) One seminar must be taken at the department (“Computer Science and Mathematics” or “Economics”) in which the Master’s thesis is written.

(BI) 



Rules / Constraints for Study Programs

- Study Composition
 - Similar for other study programs; main differences:
 - Optional “Profile Area” with 18 credits
 - At least 18 credits in Pure Mathematics and 12 credits in Applied Mathematics
 - Industrial Internship is mandatory if not already done in Bachelor
 - At most *two* modules with level “advanced”

(Maths) 



Rules / Constraints for Study Programs

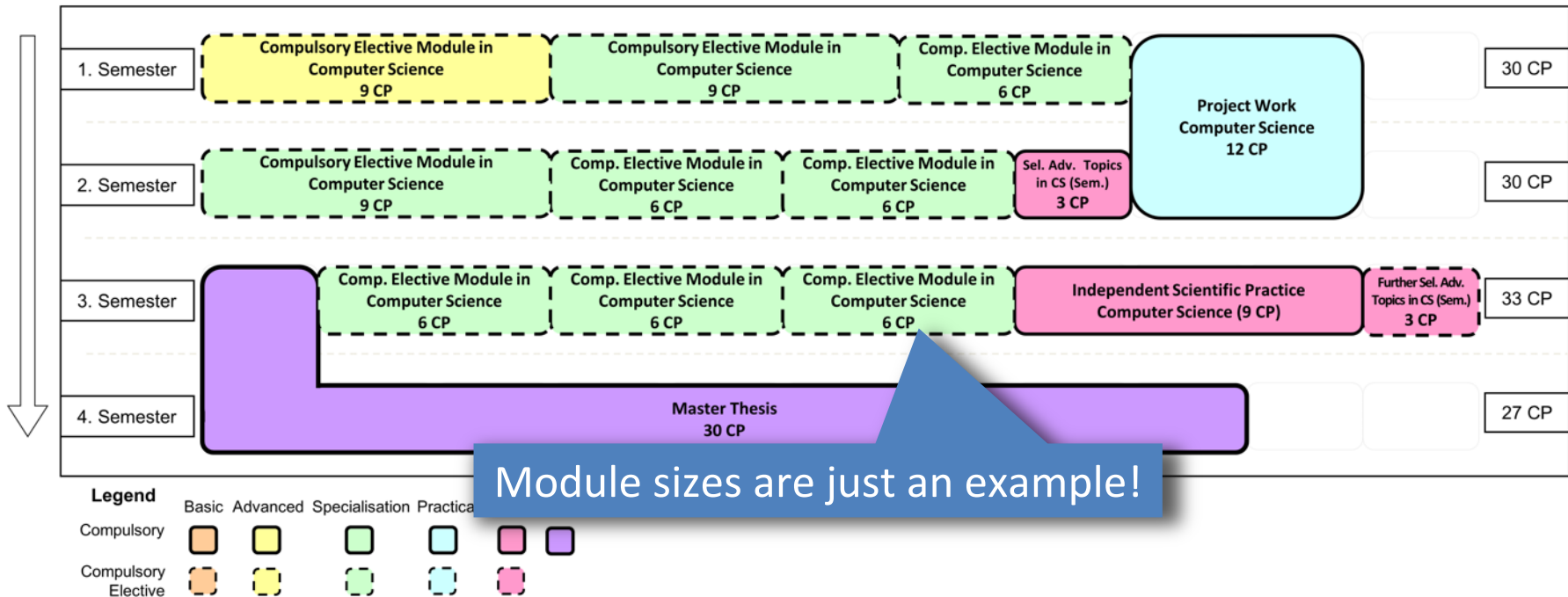
- Study Composition
 - Similar for other study programs; main differences:
 - One of the four Focus Areas (in BA or Economics) must be chosen
 - Industrial Internship is mandatory if not already done in Bachelor
 - Financial Mathematics I should be included if it has not been completed in the Bachelor
 - One to three seminars (not all combinations allowed)
 - May pick up to two computer science modules
 - One to three seminars (each must be from a different area)
 - Limits for modules with level “advanced” in different areas



Recommended Order of Studies

Computer Science (M.Sc.)

Start in a Wintersemester or Summersemester



Conditional Modules

- If your Bachelor was not fully equivalent with the Marburg Bachelor, you may have to take additional modules (see admission requirements)
- Mandatory for MSc Mathematics and Business Mathematics or in the other programs if your admission is from a previous semester.
- Must be completed within four semesters
 - Start early, so you can re-take the course if you fail
 - Courses given once a year
- Bachelor courses in German → you get English material and exam



Conditional Modules

- If your Bachelor was not fully equivalent with the Marburg Bachelor, you have received „conditional modules“ (see admission letter)
- Mandatory courses from Bachelor
- Must be completed in addition (may prolong your study by approx. one semester)
- Must be completed within four semesters
 - Start early, so you can re-take the course if you fail
 - Courses given once a year
- Bachelor courses in German → you get English material and exam



Web Portals and Services

- Course Catalog (MARVIN)
 - <https://marvin.uni-marburg.de/>
- E-Learning environment (ILIAS)
 - <https://ilias.uni-marburg.de/>
- Module Handbook
 - https://www.mathematik.uni-marburg.de/modulhandbuch/index_en.html
- Course Preview
 - <https://www.mathematik.uni-marburg.de/studium/preview/index.html?lang=en>
- Infos for Master students
 - <https://www.uni-marburg.de/en/fb12/research-groups/psw/teaching/information-for-master-students>



Online Modul Handbook

- Here, you find all modules that **may** be offered
 - Information on level, attributes, credits
 - Not all modules are offered each semester/year
 - Courses with different title might be offered for a module (see assigned modules in MARVIN)



Profile Area

- Possible areas see here:
 - Computer Science:
<https://www.uni-marburg.de/en/fb12/studying/degree-programs/m-sc-computer-science/study-structure/profile-areas>
 - Mathematics:
<https://www.uni-marburg.de/en/fb12/studying/degree-programs/m-sc-mathematics/study-structure/profile-areas>
- Application areas in Data Science:
 - <https://www.uni-marburg.de/en/fb12/studying/degree-programs/m-sc-data-science/study-structure/application-area>
- For further information on choices in area follow link into module handbook
- Attention:
 - Courses typically come from Bachelor programs
 - → Profile areas may only be possible to study in German
 - Courses may have dependencies → plan ahead



Project Work

- Visit ILIAS course – will be **online from October 13th** on!
 - Log in
 - Repository > ILIAS: Kurse aller Semester > Fb. 12: Mathematik und Informatik > Mathematik > CURRENT SEMESTER > Taentzer: SO Fortgeschrittenenpraktika und Projektarbeiten
 - Newly offered assignments
 - Presentation of completed assignments
- Group work (teams of at least three)
- 12 credits, typically over two semesters
- New topics each semester
 - Can also start in later semester, but each semester new topics
 - → It is recommended to check now if there is an interesting topic and then to decide to already follow project work or not



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Will probably be “Informatik” in the future.



Seminar („Selected Advanced Topics of ...“ or variants thereof)

- Also offered each semester
 - Can already follow a seminar
 - Often seminar topics only offered once or irregularly
 - → It is recommended to already check available topics and decide whether to take a seminar or not
- Offered seminars
 - See MARVIN
 - But some are not shown properly in the course catalog, alternative: look seminars in ILIAS
 - There you also find the seminar's individual kick-off appointment
 - For mathematics seminars
 - The kick-off may already have happened, contact the supervisor for further information
 - Check for kick-off meetings for upcoming semesters at the end of the current semester



Independent Scientific Practice ... / Master's Thesis

- Only in Computer Science, Data Science, Business Informatics
- The module “Independent Scientific Practice ...” is usually a precursor to the Master's Thesis
 - Supervised individually
 - Topic and supervisor the same as Master's thesis
- Discuss exact goals with supervisor
- Look at research groups to find topics of interest for you and a supervisor



Registration

- You do not need to register for participating in a lecture of the department
 - That is typically different for courses of other departments (e.g. BA and Economics for BI and BM or profile area modules)
 - That will change for our modules in the future as well, but you will be informed about that
- Registration only needed for exams
- Further Information
<https://www.uni-marburg.de/de/fb12/fachbereich/dekanat/pruefungsbuero>



Exam Attempts / Switching a Module

- Attempts
 - For modules of our department:
 - Up to four attempts
 - That is typically different for courses of other departments (e.g. BA and Economics for BI and BM or profile area modules)
 - BA and Economics: only three attempts
- Compulsory Elective modules
 - Once you start a module (i.e., registered for the exam) you must complete it
 - Up to two compulsory elective modules can be failed permanently and you can choose a different module
 - If you permanently fail more than two compulsory electives (or one mandatory module) you permanently fail your whole study program
 - If you want to switch a module you already started, you can voluntarily permanently fail that module



Research Groups

- Department of Mathematics and Computer Science
<https://www.uni-marburg.de/en/fb12/research-groups>
- School of Business and Economics
<https://www.uni-marburg.de/en/fb02>

