

The Departmental Council of the Department of Mathematics and Computer Science of Philipps-Universität Marburg, in accordance with §50(1) Hesse Higher Education Act (HessHG), as amended on 14 December 2009 (Law Gazette of the State of Hesse (GVBl.) I p. 22/2009, p. 666), last amended by Article 1 Act of 14 December 2021 (GVBl. p. 931) adopted the following Degree Program and Examination Regulations on 25 January 2023:

Degree Program and Examination Regulations

for the program in

“Business Informatics”

leading to the degree of

“Master of Science (M.Sc.)”

at Philipps-Universität Marburg

25 January 2023

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I. General

§1 Scope

These Degree Program and Examination Regulations supplement the General Regulations for Master's Degree Programs at Philipps-Universität Marburg of 13 September 2010 (Official Bulletin of Philipps-Universität Marburg, No. 52/2010), as amended from time to time – hereinafter referred to as the General Regulations – and regulate the objectives, content, structure and organization of the degree program as well as the requirements and procedures for the examination grades in the degree program “Business Informatics” with the degree “Master of Science (M.Sc.)”.

§2 Goals of the degree program

After completion of the master's degree program in “Computer Science”, graduates will have the necessary professional knowledge, skills and methods in business informatics, computer science and business administration, taking into account the requirements and changes in the increasingly digital professional world (business, industry, public service), to work independently according to scientific principles at an advanced level and to analyze and critically assess modern scientific knowledge. They have deepened and broadened the knowledge and skills they acquired in their bachelor's degree program and have an overview of specialist contexts in business informatics.

To achieve these goals, the master's degree program consists of specializations in business informatics, computer science, business administration and applied mathematics. By setting individual focal points, an introduction to independent scientific work, the degree program of current research literature and the preparation of an individual master's thesis, in which a research-related problem in business informatics is scientifically investigated and a solution approach is developed, the graduates have acquired specialized knowledge and skills. Graduates will also have become acquainted with concrete applications through the project-oriented parts of the degree program; likewise, they will have strengthened their social skills and driven their motivation for intrinsic learning.

Graduates of the master's program in Business Informatics are not limited to a fixed job description, also due to their ability to abstract and their trained conceptual, analytical and logical thinking. They have acquired the necessary skills

- to work independently as a business informatics specialist in industry and business, especially at banks, insurance companies and consulting firms, which are undergoing a transformation due to globalization and digitalization,
- to lead projects that involve analyzing, modeling and solving scientific, business or technical problems,
- for planning and development tasks in agile scientific and public institutions,
- to work as a research assistant or research associate at a university,
- to access a doctoral degree program.

§3 Master's degree

(1) The master's degree examination is passed if all modules provided for in accordance with §6 have been passed.

(2) After successfully completing the program in accordance with paragraph 1, the Department of Mathematics and Information Technology will award the academic degree of “Master of Science (M.Sc.)”.

II. Program-related rules

§4 Access requirements

(1) The general admission requirement for the master's degree program is proof of completion of a relevant bachelor's degree program in "Business Informatics" or proof of a comparable domestic or foreign professional university degree.

In addition to the bachelor's degree in Business Informatics, a bachelor's degree in Computer Science also entitles the student to access the program if, within the framework of this or another degree program, a total of at least 42 credits (Leistungspunkte, LP) have been completed in modules with business informatics and business administration content or expertise; of these, at least 18 credits each should have been completed from modules in the area of business informatics and in the area of business administration. In addition, a bachelor's degree in Business Administration also entitles the student to enroll if at least 42 credits have been acquired from modules in the field of computer science and business informatics as a part of this or another degree program; within this framework, skills corresponding to those of the following modules must also be demonstrated: Object-oriented programming, software engineering as well as basics of business informatics.

If no degree certificate with an overall grade is available by the application deadline, enrollment may be conditional. The prerequisite for an underlying bachelor's degree with a scope of 180 credits is that proof be provided that module examinations or partial module examinations have been passed representing at least 80% of the credits required for the bachelor's degree in question. The proof must contain an average grade that was determined on the basis of the graded module examinations and partial module examinations within the scope of the proven 80% of the credits required for the bachelor's degree. Enrollment can only take place under the proviso that all coursework and examination grades of the bachelor's degree have been completed before the start of the master's degree (deadline 31 March if the master's degree program starts in the summer semester or deadline 30 September if the master's degree program starts in the winter semester) and that proof of the degree certificate is provided by the end of the lecture period of the first subject semester.

(2) The examination committee (§16) will decide on the question of the relevance of the prior degree programs as defined in paragraph 1.

(3) The examination committee (§ 16) shall decide on the question of the comparability of the university degree within the meaning of paragraph 1.

(4) The examination committee (§16) may link admission to the condition that additional coursework grades and/or examination grades representing a maximum of 30 credits be completed. In this case, the degree program may be extended accordingly.

(5) The modules and courses of the degree program will generally be offered in English. A German-language offering will be possible on an exceptional basis if all students in the module or course wish this. The coursework and examinations can be taken in either German or English, at the student's discretion. Optional offerings and elective courses may include import modules in German from bachelor's degree programs or other departments so that the choice may be limited here, if necessary.

The specific admission requirements are: Demonstrating either:

- a) English language skills at least at level C1 of the Common European Framework of Reference for Languages, or

- b) English language skills at least at level B1 of the Common European Framework of Reference for Languages and German language skills at least corresponding to the language examination level of “DSH-2”.

(6) In addition to the general admission requirements for the degree program, participation in individual modules or parts of modules may be made dependent on the fulfillment of specific module admission requirements.

In this case, the prerequisites are listed in the module list (Appendix 2) under “Prerequisites for Participation”.

§5 Academic advising

General academic advising is provided by the Central Academic Advising Service (Zentrale Allgemeine Studienberatung, ZAS) at Philipps-Universität Marburg. Subject-specific academic advising is usually provided by the professors or by authorized persons.

§6 Degree programs: Structure, contents, curriculum, and information

(1) The master’s degree program in Business Informatics is divided into the study areas of Compulsory Elective Modules in Business Administration, Compulsory Elective Modules in Computer Science and Mathematics, Compulsory Elective Modules in Business Informatics, Practical and Seminar Modules, and Final Modules.

(2) The degree program consists of modules that are assigned to the various study areas according to Para. 1. The program structure is as follows based on module assignments, the degree to which they are required, and the student’s calculated workload in credits (Leistungspunkte, LP):

	Compulsory course (Pflicht, PF) / Compulsory elective course (Wahlpflicht, WP)	Credits (Leistungspunkte, LP)	Comment
Compulsory Elective Modules in Business Administration		18	
<i>Modules from the M.Sc. Business Administration*</i>	WP	18	**
Compulsory Elective Modules in Computer Science and Mathematics		24-30	
Cloud Computing	WP	6	
<i>Import modules from mathematics or computer science with content-related or methodological reference to the subject area of business informatics*, ***, ****</i>	WP	0-30	
Compulsory Elective Modules in Business Informatics		18-24	
Advanced Issues of Sales and Marketing	WP	6	
Advanced Topics of Information Systems in Manufacturing	WP	6	
Project Management for Software Development	WP	6	
Specialization Module Business Systems	WP	6	

Specialization Module Design and Operation of Information Systems	WP	6	
Specialization Module Digital Transformation	WP	6	
Specialization Module Information Management	WP	6	
Specialization Module Knowledge Management and Collaborative Technologies	WP	6	
Specialization Module Model-based Decision Support, Business Intelligence & Analytics	WP	6	
Specialization Module Process Management	WP	6	
<i>Import modules with content or methodological reference to the subject area of computer science*, **</i>	WP	0-24	
Practical and Seminar Modules		24-27	
Selected Advanced Topics in Business Informatics (Seminar)	WP	3	At least one module, maximum 6 credits (LP) *****
Selected Advanced Topics in Computer Science (Seminar)*	WP	3	
<i>Seminar module from the M.Sc. Business Administration*</i>	WP	6	
Project Work Business Informatics	PF	12	
Independent Scientific/Scholarly Practice Computer Science	PF	9	
Final Module		30	
Master's Thesis	PF	30	
Total		120	

* Import module according to Appendix 3 Import module list.

** In Compulsory Elective Modules in Business Administration, all modules must be chosen from the same business concentration.

*** In the two areas Compulsory Elective Modules in Computer Science and Mathematics and Compulsory Elective Modules in Business Informatics, a maximum of 18 credits (LP) in total may be acquired in advanced modules in computer science and business informatics.

**** In the area of Compulsory Elective Modules in Computer Science and Mathematics, a maximum of 9 credits (LP) may be contributed in modules from mathematics. It is recommended that students complete one.

***** A seminar must be completed in the department in which the master's thesis is to be written.

(3) In the study area Compulsory Elective Modules in Business Administration, modules are offered relating to the three concentrations: Accounting and Finance, Market-Oriented Management and Information and Innovation Management (see Appendix 3). The Accounting and Finance concentration provides students with in-depth application skills and the ability to further develop approaches to internal and external accounting as well as decision and investment theory. The Market-Oriented Management concentration provides students with in-depth application skills as well as the ability to further develop solutions in the area of a market-oriented perspective on business. The Information and Innovation Management concentration provides students with in-depth application skills as well as the ability to further develop approaches to solutions in the area of resource-based perspectives on business.

(4) In the Compulsory Elective Modules in Computer Science and Mathematics area of study, students take modules from computer science and mathematics according to their own interests, thereby deepening and broadening their competencies and knowledge from the bachelor's degree program.

(5) In the Compulsory Elective Modules in Business Informatics study area, students expand and deepen their knowledge and competencies in business informatics and have the opportunity to acquire skills in subareas of business informatics that have not yet been taken, thereby broadening their own profile.

(6) In the degree program area Practical and Seminar Modules, students deepen their practice-oriented scientific/scholarly skills. The skills practiced are essential for computer scientists – students learn to carry out a group research project, usually with the development of extensive software, which includes modelling, implementation and management. In addition, one to two compulsory elective modules serve to further profile building, whereby students learn to compare and evaluate research results. In the module Independent Scientific Practice Business Informatics, techniques of scientific work in business informatics are learned and practiced. The module also prepares students for the master's thesis, and it is recommended that it be taken with the prospective adviser for the master's thesis.

(7) An example sequence of the modularized program is given in the degree program curriculum (cf. Appendix 1).

(8) General information and regulations in their current form are available on the course-related website at

<https://www.uni-marburg.de/de/fb12/studium/studiengaenge/m-sc-wirtschaftsinformatik>

In particular, the module handbook and the degree program curriculum can be viewed there. Furthermore, a list of the current import and export opportunities for the degree program is published there.

(9) The assignment of the individual courses to the modules of the degree program can be seen in the course catalog of Philipps-Universität Marburg, which is available on the homepage of the university.

§7 General standard program duration and start of studies

(1) The general standard period of study for the master's degree program Business Informatics is 4 semesters. On the basis of these Degree Program and Examination Regulations, the department will ensure a range of courses enabling students to complete all of the work required to pass the degree program, including preparing the master's thesis, within the general standard program duration.

(2) The degree program can be started in either winter or summer semester.

§8 Study abroad

(1) The International Student Advisory Service of the respective department as well as the offices and academic units at Philipps-Universität Marburg responsible for study abroad programs will advise students on various destination universities as well as on internship opportunities abroad, technical requirements, options for getting study abroad work recognized as well as funding opportunities.

(2) Students will conclude a learning agreement with their department and the foreign host university prior to their stay abroad. The degree program to be completed abroad as well as the credits to be earned upon successful completion of a module or course must be specified in this kind of learning agreement. The students will agree to complete the agreed degree program at the host university as an integral part of their studies and the department will recognize the credits earned. The learning agreement is binding on the parties involved. To conclude a learning agreement, it is essential that the targeted learning outcomes and skills largely coincide. It is not necessary that the content be the same.

(3) In justified exceptional cases, the learning agreement can be modified or adapted before and during the stay abroad at the request of the student with the consent of the department. The consent of the foreign host university is also required.

(4) Departures from the commitments made in the learning agreement will be permitted after the fact only if they are not the student's fault and appropriate documentation is provided.

§9 Structural variant of the degree program

The master's program in Business Informatics corresponds to the structural variant of a "single-subject program".

§10 Modules and credits

The rules under §10 of the General Regulations apply.

§11 Practical modules and profile modules

(1) The master's program in Business Informatics includes an internal practical module in the degree program area Practical and Seminar Modules in accordance with §6 of these Degree Program and Examination Regulations.

(2) The master's program in Business Informatics does not include an external practical module in accordance with §6 of these Degree Program and Examination Regulations.

(3) Otherwise, the provisions of §11 of the General Regulations apply.

§12 Module and course registration and module and course deregistration

(1) Binding registration is required for modules or courses in individual cases, insofar as this is specified in the module handbook.

(2) The registration and deregistration procedure as well as the registration and deregistration deadlines will be announced in a timely fashion on the degree program-related website in accordance with §6(8). In the event of limited capacity, module or course placements are allocated in accordance with §13 of these Degree Program and Examination Regulations.

§13 Access to compulsory elective modules or courses with limited participation options

(1) Registration caps may be set for compulsory elective modules and courses by means of a departmental council resolution, provided that this is absolutely necessary for the implementation of orderly teaching and degree program operations and for the achievement of the educational objective. Whenever the number of participants is fixed,

this will be announced in an appropriate manner and in a timely fashion before the start of the compulsory elective module or course.

(2) For a compulsory elective module or a course with limited capacity, there is no entitlement to participate provided that there is open capacity to take at least one other alternative compulsory elective module or course.

(3) If the number of registrations for a compulsory elective module or course exceeds the number of available places, a selection must be made.

The selection will be conducted by lot.

In all cases, it must be ensured that, within the framework of the available capacity, hardship cases are considered in advance, in particular those as defined by §26(1 and 2) (Priority Group 1) and students with a special interest in participation (Priority Group 2). A special interest exists in particular for students:

- for whom the required elective module or course is required due to an internal specialization,
- who did not receive a place in a previous semester despite having registered, even though the degree program curriculum provided for the compulsory elective module,
- who previously did not pass the compulsory elective module or course, if repeating the module or course is required to retake the examination.

If, in individual cases, the available places are not sufficient for consideration of the two priority groups, students from Priority Group 1 must have priority registration; within each group, the decision is then made by drawing lots.

§14 Application of modules across degree programs

(1) Modules are planned that are based on the provisions of other degree programs (“import modules”) in terms of what they offer and their examination rules. More detailed information on these modules is summarized in Appendix 3.

(2) Modules offered in the master’s program in Business Informatics, which can also be completed in the context of other degree programs, are subject to the regulations of §20(4) of these Degree Program and Examination Regulations as well as §14(2) of the General Regulations.

§15 Academic grades

§15(1) of the General Regulations applies.

III. Examination-related provisions

§16 Examination committee

(1) The departmental council will appoint the examination committee.

(2) The members of the examination committee will consist of:

1. Four professors,
2. One research assistant, and
3. Two students.

One substitute member will be elected for each member.

Three of the members in accordance with item 1 should come from the field of computer science, and one should come from the field of mathematics. In addition to the members specified above, one professor from the Department of Economics will attend the meetings of the examination committee in an advisory capacity. The student

representatives on the departmental council can additionally nominate a student who is enrolled in the bachelor's degree program or in the master's degree program in "Business Informatics" and who also participates in the meetings of the examination committee in an advisory capacity.

(3) The term of office, the chairship, quorum and other issues are governed by §16 of the General Regulations.

§17 Duties of the examination committee and examination administration

The rules under §17 of the General Regulations apply.

§18 Examiners and observers

The rules under §18 of the General Regulations apply.

§19 Recognition of academic grades and examination results

The rules under §19 of the General Regulations apply.

§20 Module list, import and export module list and module manual

(1) The modules to be completed as part of the degree program are summarized in the module list (Appendix 2) as well as in the list of import modules (Appendix 3). These lists as well as §6 provide the type of modules, their allocation to the various areas of the degree program, choices among modules and within modules, the prerequisites for participation in the modules as well as the credits to be earned, the form of examination, assessment and the expertise objectives. In the case of import modules, the original module lists of the offering degree program provide this information.

(2) The offer of import modules is subject to the provision that changes to the modules can be made by the offering academic units (e.g. in particular using accreditations). This does not require an amendment to these Degree Program and Examination Regulations. Such changes will be announced by the examination committee in a timely fashion on the program website. In addition, the examination committee may decide that in general or in individual cases upon a justified petition, additional modules may be allowed as import modules, provided that the offering department or institution agrees to this.

(3) Further information with detailed module descriptions as well as the current range of import modules will be published in a module handbook on the program website.

(4) The export modules are summarized in Appendix 4.

§21 Examinations

The rules under §21 of the General Regulations apply.

§22 Examination types and durations; test-taking times; scopes

(1) Written examinations will take the form of:

- Written examinations (*Klausuren*), which may also be conducted in whole or in part as e-examinations (in accordance with Appendix 6 of the General Regulations) and in whole or in part as multiple-choice examinations ("answer-choice examinations"; in accordance with Appendix 8 of the General Regulations).

- Term papers (*Hausarbeiten*)
- Written analyses (*schriftliche Ausarbeitungen*), or
- The master's thesis.

(2) Oral examinations will take the form of:

- Individual tests, or
- The oral defense of the master's thesis.

(3) Additional examination forms include:

- Presentations
- Seminar presentations
- Software creations

(4) The following durations or test-taking times and scopes are assigned to the examination forms mentioned above. In the case of written examinations that are not conducted under supervision, the total time available to take the tests should be longer. The duration of the individual examinations is 60-120 minutes for written examinations and 20-30 minutes for individual oral examinations. As a rule, the term paper (*Hausarbeit*) should be 10-20 pages in length and thus take about three weeks to complete (in the sense of a standard examination period). Written papers are usually 10-20 pages long and take about two weeks to complete; seminar presentations take place as part of a module event (max. 90 minutes). The test-taking time for software development as a course-related examination corresponds to approximately eight weeks; this examination form usually comprises artifact programming code, planning and user and programming documentation as well as presentation material. The scope or length of the master's thesis is usually 30-90 pages. The oral defense lasts a maximum of 60 minutes.

(5) The corresponding regulations of the Degree Program and Examination Regulations for the degree programs from which the modules are imported, as amended, will apply to the import modules in accordance with Appendix 3 or the examinations provided for in that appendix.

(6) Multimedia-based written examinations ("e-examinations") will be administered in accordance with the provisions under General Regulations, Appendix 6.

(7) Multiple-choice examinations will take place in accordance with the provisions in the General Regulations ("answer-choice examinations"), Appendix 8.

(8) Otherwise, the provisions of §22 General Regulations apply.

§23 Master's thesis

(1) The master's thesis (graduation paper) is a mandatory component of the degree program. It constitutes a final joint module together with an oral defense. The master's thesis must be written in German or English.

(2) The master's thesis is an examination paper with which the candidate is to demonstrate the ability to independently work on a delimited problem in the subject area of business informatics using scientific methods within a specified period of time. It aims at the candidate applying the knowledge acquired in the course of study to relevant business administration questions, for the solution of which advanced knowledge, skills and techniques from computer science are used to a particular extent.

It further aims to present the results in written form in a scientific/scholarly manner and to appropriately present and defend them publicly. The scope of the master's thesis is 27 credits. The final module includes an additional 3 credits for the oral defense.

(3) The master's thesis must be written as an individual work.

(4) Permission to start the master's thesis requires that at least 12 credits were earned in the area of Compulsory Elective Modules in Business Administration and that the modules "Independent Scientific Practice Business Informatics" and a seminar module have been passed and completed at the same department as the master's thesis. A total of at least 66 credits (LP) must have been earned in the modules for the master's degree program.

(5) The candidate will propose an adviser and a reviewer authorized as examiner as the first reviewer for the master's thesis. The candidate also has the right to propose the second reviewer. The adviser and the first reviewer may be the same person. These proposals do not establish an entitlement. The first reviewer must be appointed by the examination committee for the examination of master's theses. The topic of the master's thesis is submitted to the examination committee by the first reviewer and assigned by the examination committee. If the candidate does not find an adviser and a first reviewer, the chair of the examination committee will appoint the adviser and the first reviewer and ensure that a topic for the master's thesis is issued in a timely fashion.

(6) The master's thesis must be completed within a thesis-writing period of 6 months. The topic of the thesis must be such that it can be written within this period. An extension of the thesis-writing time up to a maximum of 20% (e.g. due to unforeseen problems in obtaining literature or data) is possible upon justified petition by the candidate; this does not lead to the award of additional credits. The thesis-writing time begins upon issuances of the topic; the issue date must be recorded. The topic should be issued in a timely manner such that, even if an extension of the thesis-writing time is granted, there is no extension of the program duration.

(7) The master's thesis must be submitted in a timely fashion to the examination committee or to an office designated by it in 3 printed copies as well as in digital form in accordance with the specifications of the examination committee. The time of submission must be recorded in the records. When submitting the thesis, the candidate must give written assurance that he or she wrote the thesis independently and did not use any sources or aids other than those indicated. If the master's thesis is not submitted on time, it will be graded as "insufficient" (0 points) in accordance with §28(2) of the General Regulations.

(8) The master's thesis has not been passed if the overall grade does not receive at least 5 points (grade of "sufficient") in accordance with §28(2) of the General Regulations; it may be repeated once. The oral defense as part of the final module can also be repeated once. The examination committee will ensure that the candidate receives a new topic within six weeks of notification of the failure. A return of the topic within the period specified in §23(7)(1) of the General Regulations is permitted only if the candidate did not make use of this option when writing the master's thesis for the first time. A second repetition of the master's thesis is excluded.

(9) Grade compensation for a failed master's thesis is not permitted. Grade compensation for a failed oral defense within the scope of the final module is also excluded.

(10) Otherwise, the provisions of §23 of the General Regulations apply.

§24 Examination dates, examination registration and examination deregistration

(1) The examination committee will announce the periods of examinations and repeat examinations. Dates for examinations and other examination dates that are equally valid for all participants of a module are also announced in the course catalog. Examination dates to be agreed upon individually (such as presentations) will be listed in the course catalog with the note “n. V.” (by arrangement).

(2) Examinations will be administered within the framework of the respective module courses or immediately thereafter. If examinations are administered after module courses, they should generally be offered in a two- to three-week examination period at the end of the lecture period or at the beginning or end of the subsequent lecture-free period. As a rule, examinations should be administered on the same day of the week and at the same time as the corresponding module course. The examiner should also provide for the preparation of examinations, such as term papers, during the lecture-free period.

(3) For the repetition of examinations, the first repetition date will be set in such a way that, in the case of successful participation, continued study in the following semester is guaranteed.

(4) Binding registration is required for participation in an examination. The examination committee will announce the deadlines and the form of registration in an appropriate manner no later than 4 weeks before the start of the registration period. Permission to take the examination will be denied if the registration deadline is not met or if examination permission requirements are not met.

(5) When registering for examinations, students can autonomously choose between the first date and the repeat date. When choosing the date for the repeat examination, no further repeat examination will be offered in the same semester in case of failure. In this case, if subsequent modules build on each other (consecutive modules) and require the failed module, continuous study in deviation from §24(3) cannot be guaranteed the following semester.

(6) A binding examination registration may be withdrawn without stating reasons provided that this is done before the deadline set for this by the examination committee. These deadlines as well as the format for the withdrawal will be announced together with the corresponding regulations for registration.

§25 Time requirements to earn credits

The rules under §25 of the General Regulations apply.

§26 Family support, accommodations for hardships and informal part-time study

(1) In courses and examinations, consideration must be given to the stress caused by pregnancy and raising children, by caring for relatives in need, and by a student's disability or chronic illness. The type and severity of the hardship must be proved by the student in a timely fashion to the person responsible for the course or to the office of the examination committee (Examination Office) with suitable documentation. In cases of doubt, the examination committee will decide upon written petition. In cases

of illness, the examination committee may require a medical certificate from a public health officer. It must be made possible for students to utilize statutory maternity protection periods and parental leave.

(2) If a student can credibly demonstrate that he or she is unable to take the examination in whole or in part in the scheduled form due to a disability, a chronic illness, the care of dependents in need, pregnancy, or the raising of children, the examination committee will provide accommodations for these by taking appropriate measures, such as an extension of the test-taking time or a different arrangement of the examination procedure.

(3) In accordance with the applicable legal regulations, the degree program may, upon petition, be conducted in whole or in part as an informal part-time program. In the case of an approved informal part-time study, there is no entitlement to the provision of special teaching and study opportunities. In all cases, academic advising is strongly recommended before initiating informal part-time study.

§27 Absence, withdrawal, fraud, violation of regulations

(1) Coursework will be deemed failed, or an examination will be graded as “insufficient” (0 points) in accordance with §28(2) of the General Regulations if the candidate misses an examination date that is binding on him or her without good reason or if he or she withdraws without good reason from a course or examination which he or she has already started. The same applies if a course or examination is not completed within the specified completion time.

(2) Notice of the cause asserted for the failure or withdrawal must be given in writing without delay and must be credible. In the case of illness, a medical certificate must be submitted. The examination results already available will be recognized in this case.

(3) If a candidate attempts to influence the result of a course or examination by deception or the use of unauthorized aids, the course or examination in question will be deemed failed (0 points) in accordance with §28(2) of the General Regulations. A candidate who disrupts the proper performance of a type of coursework or an examination may be excluded from continuing the performance of the type of coursework or examination by the respective examiner or supervisor; in this case, the respective coursework will also be deemed failed, or the examination will be graded as “insufficient” (0 points) in accordance with §28(2) of the General Regulations. In serious cases, the examination committee can exclude the candidate from taking further examinations such that the examination entitlement in the degree program expires.

(4) Decisions in accordance with paragraphs 1 to 3 must be communicated to the candidate in writing without delay, they must be substantiated, and they must be accompanied by instructions on how to appeal.

§28 Grading and grade composition

(1) The modules Project Work Business Informatics and Independent Scientific Practice Working Business Informatics are not assessed with points, in deviation from §28(2) General Regulations.

(2) The overall grade for the master’s examination in points in accordance with Column (a) in the table in §28(6) of the General Regulations is calculated from the mean value

of the module evaluations weighted by credits (LP). Modules not graded with points (ungraded) are not taken into account.

(3) Otherwise, the provisions of §28 of General Regulations apply.

§29 Nonbinding examination option

There is no provision for a nonbinding examination option.

§30 Repeating examinations

(1) Passed examinations cannot be repeated.

(2) Failed examinations may be retaken three times.

(3) The one-time change of up to two definitively failed compulsory elective modules is permitted.

(4) §23(12) (1 & 2) General Regulations (Master's Thesis and Oral defense) and §21(3) (4) General Regulations (Compensated Partial Module Examinations) remain unaffected

§31 Loss of the right to take the examination and final failure

(1) The right to take examinations in the degree program for which the student is enrolled is definitively lost in particular if

1. An examination has not been passed after exhausting all attempts to repeat it unless it is an examination in a module pursuant to §30(3);
2. There is a serious case of deception pursuant to §27(3)(cl. 3).

(2) A notice of final failure and the associated loss of the right to retake the examination will be issued, which will be accompanied with instructions on how to appeal.

§32 Invalidity of examination results

The rules under §32 of the General Regulations apply.

§33 Certificate

The rules under §33 of the General Regulations apply.

§34 Diploma

The rules under §34 of the General Regulations apply.

§35 Diploma supplement

The rules under §35 of the General Regulations apply.

§36 Transcript of records and complete grade record

The rules under §36 of the General Regulations apply.

IV. Final provisions

§37 Inspection of examination documents

The rules under §37 of the General Regulations apply.

§38 Effective date and transitional provisions

(1) These regulations come into force on the day after their publication in the Official Bulletin of Philipps-Universität Marburg. At the same time, the examination regulations will expire for the degree program in “Business Informatics” with the degree of Master of Science (M.Sc.) of 28 October 2015 (published in the Official Bulletin of Philipps-Universität Marburg No. 6/2016), including the version of the first amendment dated 1 June 2016 (published in the Official Bulletin of Philipps-Universität Marburg No. 56/2016), and the version of the second amendment dated 25 October 2017 (published in the Official Bulletin of Philipps-Universität Marburg No. 80/2017).

(2) These Degree Program and Examination Regulations will apply to all students who start their studies as of winter semester 2023/2024.

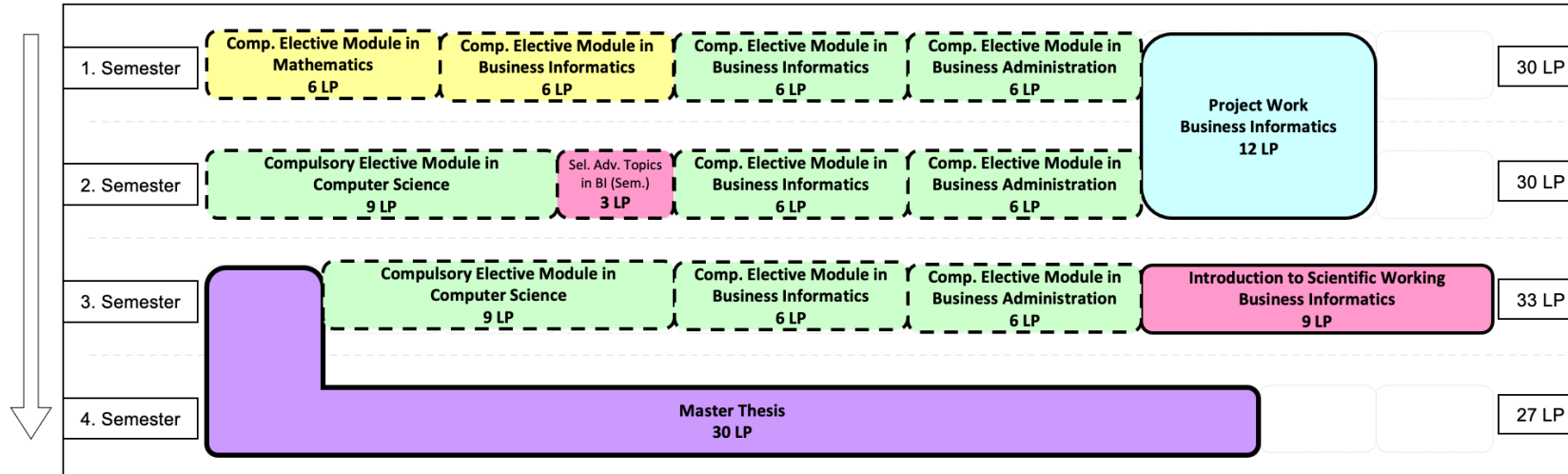
(3) Students who began their studies before these Degree Program and Examination Regulations came into force may take the master’s examination in accordance with the examination regulations of 28 October 2015, including their amended versions of 1 June 2016 and 25 October 2017, until summer semester of 2027 at the latest. The examination committee may issue rules for this transition period that favor a voluntary switch to these Degree Program and Examination Regulations. The switch to these Degree Program and Examination Regulations must be applied for in writing and is irrevocable.

Marburg, 18 April 2023
signed
Prof. Dr. Bernd Freisleben
Dean of the Department of
Mathematics and Computer Science
at Philipps-Universität Marburg

Appendix 1: Example degree program curriculum

Business Informatics (M.Sc.)¹

Studienbeginn in einem Wintersemester oder einem Sommersemester



Anmerkungen

¹ Dargestellt wird hier der kürzest mögliche Studienverlauf mit exemplarischen Inhalten. Entsprechend verändert sich dieser nach Zeitpunkt der Aufnahme des Studiums oder einer zeitlichen Streckung. Zudem stellen gestrichelt skizzierte Wahlpflichtmodule nur eine beispielhafte Auswahl dar, zu der Alternativen möglich sind.



Anlage 1: Exemplarischer Studienverlaufsplan	Appendix 1: Example degree program curriculum
<i>Business Informatics (M.Sc.)^f</i>	<i>Business Informatics (M.Sc.)^f</i>
Studienbeginn in einem Wintersemester oder einem Sommersemester	Start of program in winter or summer semester
1. Semester	1. Semester
Comp. Elective Module in Mathematics 6 LP	Comp. Elective Module in Mathematics 6 LP
Comp. Elective Module in Business Informatics 6 LP	Comp. Elective Module in Business Informatics 6 LP
Comp. Elective Module In Business Informatics 6 LP	Comp. Elective Module in Business Informatics 6 LP
Comp. Elective Module In Business Administration 6 LP	Comp. Elective Module in Business Administration 6 LP
2. Semester	2. Semester
Compulsory Elective Module in Computer Science 9 LP	Compulsory Elective Module in Computer Science 9 LP
Sel. Adv. Topics in BI (Sem.) 3 LP	Sel. Adv. Topics in BI (Sem.) 3 LP
Comp. Elective Module In Business Informatics 6 LP	Comp. Elective Module in Business Informatics 6 LP
Comp. Elective Module in Business Administration 6 LP	Comp. Elective Module in Business Administration 6 LP
Project Work Business Informatics 12 LP	Project Work Business Informatics 12 LP
30LP	30 LP
30LP	30 LP
3. Semester	3. Semester
Compulsory Elective Module In Computer Science 9 LP	Compulsory Elective Module in Computer Science 9 LP
Comp. Elective Module in Business Informatics 6 LP	Comp. Elective Module in Business Informatics 6 LP
Comp. Elective Module in Business Administration 6 LP	Comp. Elective Module in Business Administration 6 LP

Introduction to Scientific Working Business Informatics 9 LP	Introduction to Scientific Working Business Informatics 9 LP
33 LP	33 LP
4. Semester	4. Semester
Master Thesis 30 LP	Master's Thesis 30 LP
27 LP	27 LP
Anmerkungen	Footnotes
¹ Dargestellt wird hier der kürzest mögliche Studienverlauf mit exemplarischen Inhalten. Entsprechend verändert sich dieser nach Zeitpunkt der Aufnahme des Studiums oder einer zeitlichen Streckung. Zudem stellen gestrichelt skizzierte Wahlpflichtmodule nur eine beispielhafte Auswahl dar, zu der Alternativen möglich sind.	¹ The shortest possible degree program curriculum with content examples is presented here. Accordingly, this changes after the date that the program is started or an extension. In addition, elective modules outlined in dashed lines represent only an example selection for which alternatives are possible.
Legende	Legend
Pflichtmodule	Compulsory module
Wahlpflicht	Compulsory Elective
Basis	Basic
Aufbau	Advanced
Vertiefung	Specialization
Praxis	Practice
Profil	Profile
Abschluss	Degree

Appendix 2: List of modules

Name of module <i>German translation</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)	
Compulsory Elective Modules in Computer Science And Mathematics							
Cloud Computing <i>Cloud Computing</i>	CS 514	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - Know the basic concepts of cloud computing, - Can create software that runs in the cloud, - Can conceptualize cloud infrastructures and tools, - are able to apply scientific working methods in independently identifying, formulating, and solving problems, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	<p>None.</p> <p>The competences taught in the modules Object-Oriented Programming, Algorithms and Data Structures, and Operating Systems, and Computer Communication are recommended.</p>	<p>Academic performance grade: Earn at least 50% of the points from the weekly practice assignments and an oral presentation of the solution to at least two of the practice assignments.</p> <p>Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)</p>
Compulsory Elective Modules in Business Informatics							
Advanced Issues of Sales and Marketing <i>IT-Vertrieb und Marketing in einer digitalisierten Welt</i>	CS 633	6	Compulsory elective module	Advanced module	<p>Students will understand the fundamentals and processes involved in technology sales with a focus on information technology. They can describe and prove with so-called "best practices" from the industry how effective and efficient product sales can be presented. Likewise, students will be able to describe models for mass distribution as well as complex technology distribution of capital goods. They know how technological progress, with a focus on the internet, allows for completely new sales scenarios. They will be able to apply these skills in the form of a real-world case study.</p>	<p>None.</p> <p>Basic competencies in business administration as taught in the basic business modules are recommended.</p>	<p>Two subtests: Term paper (weighting: 3 credits) and presentation (weighting: 3 credits)</p>
Advanced Topics of Information Systems in Manufacturing <i>Ausgewählte Schwerpunkte der Wirtschaftsinformatik in der Fertigungsindustrie</i>	CS 675	6	Compulsory elective module	Advanced module	<p>Students are able to trace the structural change to the information society and identify basic elements of hybrid value creation. Students are just as familiar with the basics of product life cycle management (PLM) as they are with the associated aspects of economic efficiency. They master's the modeling of business processes with business process model and notation (BPMN), key figures for the assessment and control of processes as well as approaches for the design of business information systems, and for the aforementioned context they can apply central aspects of IT controlling.</p>	<p>None.</p>	<p>Two subtests: Written exam (3 credits) and presentation of project results (3 credits)</p>
Project Management for Software Development	CS 630	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - know what makes a good project manager and what the success factors for good project management are, 	<p>None.</p> <p>Recommended competencies are</p>	<p>Academic performance grade: Earn at least 50% of the points from the weekly</p>

Name of module <i>German translation</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)
<i>Projektmanagement für Software-Entwicklungsprojekte</i>				<ul style="list-style-type: none"> - know classic project management topics that are important for the successful implementation of large and small software projects in business, - know the difference between classical and agile process models and their areas of application, - know the tools of a project manager for planning and controlling, quality and risk management, - can estimate realistic expenses and know the framework conditions to be observed, - know necessary personal competencies of a project manager to lead a project to success, - know the legal framework relevant for a project manager, - know project management patterns that fill a project manager's toolbox, - are familiar with the various tools and can assess their effect in concrete situations and with typical problems. 	those taught in the Software Engineering module.	<p>practice assignments and an oral presentation of the solution to at least two of the practice assignments.</p> <p>Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)</p>
CS 634 Specialization Module Business Systems <i>Vertiefungsmodul Betriebliche Kernsysteme</i>	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - have advanced knowledge and skills in core operational systems, - are familiar with the theory of the field of core operational systems and know selected applications, - are able to apply working methods from business informatics, - are familiar with current research findings and how to use research literature, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	<p>None.</p> <p>The recommended skills are taught in the basic modules on practical computer science and, if applicable, in advanced modules (depending on the topic).</p>	<p>Academic performance grade: Earn at least 50% of the points from the weekly practice assignments.</p> <p>Testing: In-class written examination (<i>Klausur</i>) or oral examination (individual examination)</p>
CS 636 Specialization Module Design and Operation of Information Systems <i>Vertiefungsmodul Entwicklung und Betrieb von Informationssystemen</i>	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - have advanced knowledge and skills in information systems development and operation, - are familiar with the theory of the field of information systems development and operation and know selected applications, - are able to apply working methods from business informatics, - are familiar with current research findings and how to use research literature, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	<p>None.</p> <p>The recommended skills are taught in the basic modules on practical computer science and, if applicable, in advanced modules (depending on the topic).</p>	<p>Academic performance grade: Earn at least 50% of the points from the weekly practice assignments.</p> <p>Testing: In-class written examination (<i>Klausur</i>) or oral examination (individual examination)</p>
CS 635 Specialization Module Digital Transformation <i>Vertiefungsmodul Digitale Transformation</i>	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - have advanced knowledge and skills in the area of digital transformation, - are familiar with the theory of the field of digital transformation and know selected applications, - are able to apply working methods from business informatics, 	<p>None.</p> <p>The recommended skills are taught in the basic modules on practical computer</p>	<p>Academic performance grade: Earn at least 50% of the points from the weekly practice assignments.</p>

Name of module <i>German translation</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)
				<ul style="list-style-type: none"> - are familiar with current research findings and how to use research literature, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	science and, if applicable, in advanced modules (depending on the topic).	Testing: In-class written examination (<i>Klausur</i>) or oral examination (individual examination)
CS 637 Specialization Module Information Management <i>Vertiefungsmodul Informationsmanagement</i>	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - have advanced knowledge and skills in information management, - are familiar with the theory of the field of information management and know selected applications, - are able to apply working methods from business informatics, - are familiar with current research findings and how to use research literature, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	None. The recommended skills are taught in the basic modules on practical computer science and, if applicable, in advanced modules (depending on the topic).	Academic performance grade: Earn at least 50% of the points from the weekly practice assignments. Testing: In-class written examination (<i>Klausur</i>) or oral examination (individual examination)
CS 640 Specialization Module Knowledge Management and Collaborative Technologies <i>Vertiefungsmodul Wissensmanagement und kollaborative Technologien</i>	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - have advanced knowledge and skills in knowledge management and collaborative technologies, - are familiar with the theory of the field of knowledge management and collaborative technologies and know selected applications, - are able to apply working methods from business informatics, - are familiar with current research findings and how to use research literature, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	None. The recommended skills are taught in the basic modules on practical computer science and, if applicable, in advanced modules (depending on the topic).	Academic performance grade: Earn at least 50% of the points from the weekly practice assignments. Testing: In-class written examination (<i>Klausur</i>) or oral examination (individual examination)
CS 638 Specialization Module Model-based Decision Support, Business Intelligence & Analytics <i>Vertiefungsmodul Modellbasierte Entscheidungsunterstützung, Business Intelligence & Analytics</i>	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - have advanced knowledge and skills in model-based decision support, business intelligence & analytics, - are familiar with the theory of the area model-based decision support, business intelligence & analytics and know selected applications, - are able to apply working methods from business informatics, - are familiar with current research findings and how to use research literature, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	None. The recommended skills are taught in the basic modules on practical computer science and, if applicable, in advanced modules (depending on the topic).	Academic performance grade: Earn at least 50% of the points from the weekly practice assignments. Testing: In-class written examination (<i>Klausur</i>) or oral examination (individual examination)
CS 639 Specialization Module Process Management <i>Vertiefungsmodul Prozessmanagement</i>	6	Compulsory elective module	Advanced module	<p>Students:</p> <ul style="list-style-type: none"> - have advanced knowledge and skills in process management, - are familiar with the theory of the field of process management and know selected applications, - are able to apply working methods from business informatics, 	None. The recommended skills are taught in the basic modules on practical computer	Academic performance grade: Earn at least 50% of the points from the weekly practice assignments.

Name of module <i>German translation</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)
				<ul style="list-style-type: none"> - are familiar with current research findings and how to use research literature, - are able to speak freely about scientific content both in front of an audience and in a discussion. 	science and, if applicable, in advanced modules (depending on the topic).	Testing: In-class written examination (<i>Klausur</i>) or oral examination (individual examination)
Practical and Seminar Modules						
CS 612 Selected Advanced Topics in Business Informatics (Seminar) <i>Ausgewählte fortgeschrittene Themen der Wirtschaftsinformatik („Seminar“)</i>	3	Compulsory elective module	Profile module	Students are able to: <ul style="list-style-type: none"> - develop a special topic in business informatics independently, - work in an independent, advanced and scientific manner, - Prepare, divide and supplement explanatory content in business informatics, - work with scientific literature and know how to search for it, - know how to give a structured presentation tailored to the expertise of the audience, - deal with presentation media in an advanced manner, - lead structured discussions in groups about business information systems content. 	None. Previous knowledge is recommended, depending on the specialization of the seminar, but generally knowledge from the basic modules of computer science and mathematics.	Two subtests: Seminar lecture (weight: 1 credit) Written analysis (<i>schriftliche Ausarbeitung</i>) (weight: 2 credits)
CS 689 Independent Scientific/Scholarly Practice Computer Science <i>Selbstständiges wissenschaftliches Arbeiten Wirtschaftsinformatik</i>	9	Compulsory module	Profile module	Students: <ul style="list-style-type: none"> - are able to independently review and expand the state of knowledge in a scientific area from the field of business informatics based on literature recommendations and familiarize themselves with the state of research, - are able to compare research results with regard to quantitative and qualitative criteria, - are able to conduct literature searches in accordance with subject-specific methods, - are able to use systems that support scientific work in the field of the master's thesis. 	None. The skills taught in the advanced and specialization modules are recommended.	Testing: Written analysis (<i>schriftliche Ausarbeitung</i>) Ungraded module
CS 688 Project Work Business Informatics <i>Projektarbeit Wirtschaftsinformatik</i>	12	Compulsory module	Practice module	Students: <ul style="list-style-type: none"> - are able to work on an extensive task from business informatics in a team of several students. This includes: elaboration, adaptation, extension and development of problem-relevant methods, - the ability to learn, plan and, work independently, - are proficient in project control and monitoring methods, e.g.: goal descriptions, planning, milestones, record keeping, deadlines, delegation, controlling, - have team-related social skills: Cooperation, team development, leadership, motivation, well-structured team of employees, working under deadline pressure, - have mastered methods of documentation and presentation of IT projects for users and third parties in the form of program documentation, project reports and, if necessary, publications. 	None.	Testing: Creating a piece of software (the term “software” includes all created artifacts, in particular the program code, planning documents, user and developer manuals, and presentation materials). Ungraded module

Name of module <i>German translation</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)	
Final Module							
Master's Thesis <i>Masterarbeit</i>	CS 690	30	Compulsory module	Final module	Students are able to:work on an extensive task from the field of business informatics using scientific methods under guidance as well as present a paper and the results contained therein appropriately in writing and orally.	Permission to start the master's thesis requires that at least 12 credits have been earned in the compulsory elective modules in Business Administration and that the modules "Independent Scientific Practice Business Informatics" and a seminar module have been passed and completed in the same department as the master's thesis. A total of at least 66 credits (LP) must have been earned in the modules for the master's degree program.	Two subtests: Master's thesis (weighting: 27 credits) and oral defense (weighting: 3 credits)

Name of module <i>Deutscher Modultitel</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)
Conditional Modules (<i>Auflagenmodule</i>)						
Note: These credits (LP) serve to fulfill conditional requirements only and do not count toward the 120 credits to be earned for the degree.						
Conditional Module 1 (small) <i>Kleines Auflagenmodul 1</i>	6	--- (<i>Auflagenmodul</i>)	--- (<i>Auflagenmodul</i>)	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will develop the skills by reading specialized literature and/or participating in (online) courses.	The prerequisite for this module is that it be specified as a requirement for admission to the program as part of a condition under §4(4).	Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)
Conditional Module 2 (small) <i>Kleines Auflagenmodul 2</i>	6	--- (<i>Auflagenmodul</i>)	--- (<i>Auflagenmodul</i>)	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will	The prerequisite for this module is that it be specified as a requirement for admission to the program as part of a condition under §4(4).	Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)

Name of module <i>Deutscher Modultitel</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)
				develop the skills by reading specialized literature and/or participating in (online) courses.		
Conditional Module 3 (small) <i>Kleines Auflagenmodul 3</i>	6	--- (Auflagenmodul)	--- (Auflagenmodul)	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will develop the skills by reading specialized literature and/or participating in (online) courses.	The prerequisite for this module is that it be specified as a requirement for admission to the program as part of a condition under §4(4).	Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)
Conditional Module 4 (small) <i>Kleines Auflagenmodul 4</i>	6	--- (Auflagenmodul)	--- (Auflagenmodul)	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will develop the skills by reading specialized literature and/or participating in (online) courses.	The prerequisite for this module is that it be specified as a requirement for admission to the program as part of a condition under §4(4).	Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)
Conditional Module 5 (small) <i>Kleines Auflagenmodul 5</i>	6	--- (Auflagenmodul)	--- (Auflagenmodul)	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will develop the skills by reading specialized literature and/or participating in (online) courses.	The prerequisite for this module is that it be specified as a requirement for admission to the program as part of a condition under §4(4).	Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)
Conditional Module 1 (large) <i>Großes Auflagenmodul 1</i>	9	--- (Auflagenmodul)	--- (Auflagenmodul)	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will develop the skills by reading specialized literature and/or participating in (online) courses.	The prerequisite for this module is that it be specified as a requirement for admission to the program as part of a condition under §4(4).	Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)
Conditional Module 2 (large) <i>Großes Auflagenmodul 2</i>	9	--- (Auflagenmodul)	--- (Auflagenmodul)	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will develop the skills by reading specialized literature and/or participating in (online) courses.	The prerequisite for this module is that it be specified as a requirement for admission to the program as part of a condition under §4(4).	Testing: Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)
Conditional Module 3 (large)	9	---	---	Within the framework of their bachelor's degree, students have already gained the ability to independently acquire knowledge	The prerequisite for this module is that it be	Testing:

Name of module <i>Deutscher Modultitel</i>	LP	Degree of obligation	Level	Qualification goals	Prerequisites	Prerequisites to earn credits (LP)
<i>Großes Auflagenmodul 3</i>		<i>(Auflagenmodul)</i>	<i>(Auflagenmodul)</i>	and skills. As a part of this module, students should fill skills gaps that exist in a subject area that has been specified in more detail within the scope of a condition under §4(4) of these Degree Program and Examination Regulations. They will develop the skills by reading specialized literature and/or participating in (online) courses.	specified as a requirement for admission to the program as part of a condition under §4(4).	Oral examination (individual examination) or in-class written examination (<i>Klausur</i>)

Appendix 3: Import Module List

The degree programs listed below can be selected at the time of the adoption of these Degree Program and Examination Regulations. Pursuant to §14(1) of the General Regulations, the specifications of the Degree Program and Examination Regulations within the framework of which the modules are offered (in particular with regard to qualification objectives, prerequisites, credits (LP) and examination modalities) apply to these modules. Options for combining modules are set forth by the learning unit that offers them, as applicable.

The catalog of selectable degree programs can be changed or supplemented by the examination committee especially if the range of degree programs offered by the departments at Philipps-Universität Marburg changes. Such changes will be published by the examination committee on the respective program website. In individual cases or in general, the utilization of the following degree programs can be made dependent on the prior attendance of a degree program advising session or a binding registration. In case of enrollment caps, the corresponding regulations of the Degree Program and Examination Regulations apply. Otherwise, no guarantee is given that the courses listed below will actually be offered and can be taken.

Upon justified request by the student, it is permissible to approve additional import modules beyond the regular opportunities in individual cases; this requires that the offering department or institution also agree.

The current import opportunities are always published on the program website of the department offering the module as an export option.

Students should take note of the corresponding information and advising offerings in the department offering the module before starting coursework.

Any prerequisites or recommendations for participation as well as combination rules must be observed. If the department offering a module has specified combination rules and created export packages, depending on the scope of their own import window, only limited module course offerings will in fact be available.

At the time of the last resolution by the departmental council on the present Degree Program and Examination Regulations, an agreement existed on the following modules:

The following modules can be used for Compulsory Elective Modules in Business Administration

The current import opportunities as well as possible allocation regulations and restrictions are shown on the website for the degree program (§6[9]) or in the online module handbook linked there. Modules from the Accounting and Finance concentration are marked with “AF”, from Market-Oriented Management with “MU”, and from Information and Innovation Management with “II”.

Economics (Dept. 02), Degree Program “M.Sc. Business Administration”	Advanced Management Accounting I: Value-based Management	Specialization module	AF 6
	Advanced Management Accounting II: Managerial Decision Making, Governance, and Control	Specialization module	AF 6
	Advanced Management Accounting III: Data Analysis and Empirical Research	Specialization module	AF 6
	Asset Pricing Theory/Capital Market Theory	Specialization module	AF 6
	Behavioral Finance	Specialization module	AF 6
	Business Administration Abroad I (M.Sc.)	Specialization module	6
	Case Studies in Entrepreneurial Finance	Specialization module	AF 6
	Culture, Leadership, and Knowledge Management	Specialization module	MU 6
	Digital Business	Specialization module	II 6
	Entrepreneurship and Small Business Management	Specialization module	II 6
	Development and marketing of new products and services	Specialization module	II 6
	Development and marketing of new products: Case studies	Specialization module	II 6
	Innovative Business Models	Specialization module	II 6
	International Marketing	Specialization module	MU 6
	Management of Organizations	Specialization module	MU 6
	Managing Digital Platform Ecosystems	Specialization module	II 6
	Marketing Research in Theory and Practice	Specialization module	MU 6
	Organizational Theories and Knowledge Management	Specialization module	MU 6
	Accounting I: Concepts & International	Specialization module	AF 6
	Accounting II: Valuation & Governance	Specialization module	AF 6
	Accounting III: Selected Issues	Specialization module	AF 6
	Accounting IV: In-depth questions	Specialization module	AF 6
	Selected Problems in Banking and Finance/Banking	Specialization module	AF 6
	Strategic Management	Specialization module	MU 6
Strategic Management of Technology and Innovation: Case Studies	Specialization module	II 6	

	Strategic Management of Technology and Innovation: Intellectual Property Management	Specialization module	II 6
	Corporate Taxation I	Specialization module	AF 6
	Corporate Taxation II	Specialization module	AF 6
	Corporate Taxation III	Specialization module	AF 6
	Business Valuation: Theory and Practice	Specialization module	AF 6
	Vertical marketing in theory and practice	Specialization module	MU 6

The following modules can be used for Compulsory Elective Modules in Computer Science and Mathematics

The current import opportunities as well as possible allocation regulations and restrictions are shown on the website for the degree program (§6[9]) or in the online module handbook linked there.

Mathematics and Computer Science (Dept. 12), Degree program "B.Sc. Data Science"	Efficient Algorithms	Advanced module	9
	Foundations of Higher Mathematics	Advanced module	^M 9
	Continuous optimization	Advanced module	^M 9
	Machine Learning	Advanced module	9
Mathematics and Computer Science (Dept. 12), Degree Program "M.Sc. Data Science"	Data Science in Biomedicine	Specialization module	6
	Data Integration	Specialization module	6
	Introduction to Natural Language Processing	Specialization module	6
	Information Retrieval	Specialization module	6
Mathematics and Computer Science (Dept. 12), Degree program "B.Sc. Computer Science"	Introduction to Cryptography and Its Applications	Advanced module	6
	Design and Administration of Databases	Advanced module	6
	Graphics Programming	Advanced module	9
	Advanced Module Computer Science 1 (large)	Advanced module	9
	Advanced Module Computer Science 2 (large)	Advanced module	9
	Advanced Module Computer Science 3 (large)	Advanced module	9
	Advanced Module Computer Science 4 (large)	Advanced module	9
	Advanced Module Computer Science 5 (large)	Advanced module	9
	IT Security	Advanced module	9
	Advanced Module Computer Science 1 (small)	Advanced module	6
	Advanced Module Computer Science 2 (small)	Advanced module	6
	Advanced Module Computer Science 3 (small)	Advanced module	6
	Advanced Module Computer Science 4 (small)	Advanced module	6
	Advanced Module Computer Science 5 (small)	Advanced module	6
	Logic	Advanced module	^M 9
	NoSQL Database Systems	Advanced module	6
	Computer Networks	Advanced module	9

	Software Design and Programming Techniques	Advanced module	6
	Software Quality	Advanced module	9
	Theoretical computer science	Advanced module	9
	Distributed Data Management	Advanced module	9
Mathematics and Computer Science (Dept. 12), degree program "M.Sc. Computer Science"	Operating Systems	Specialization module	6
	Formal Methods in Software Engineering	Specialization module	9
	Advanced Methods of System Development	Specialization module	6
	Advanced Topics in Cryptography	Specialization module	6
	Large Specialization Module Computer Science 1	Specialization module	9
	Large Specialization Module Computer Science 2	Specialization module	9
	Large Specialization Module Computer Science 3	Specialization module	9
	Large Specialization Module Computer Science 4	Specialization module	9
	Large Specialization Module Computer Science 5	Specialization module	9
	Implementation of Database Systems	Specialization module	9
	Small Specialization Module Computer Science 1	Specialization module	6
	Small Specialization Module Computer Science 2	Specialization module	6
	Small Specialization Module Computer Science 3	Specialization module	6
	Small Specialization Module Computer Science 4	Specialization module	6
	Small Specialization Module Computer Science 5	Specialization module	6
	Model-driven Software Development	Specialization module	9
	Modern Methods of System Development	Specialization module	9
	Multimedia Signal Processing	Specialization module	9
	Distributed Systems	Specialization module	6
	Virtual Machines	Specialization module	6
Visual Languages	Specialization module	6	
Web Technologies	Specialization module	6	
Mathematics and Computer Science (Dept. 12), degree program "B.Sc. Mathematics"	Large Advanced Module Numerics/Optimization	Advanced module	^M 9
	Numerics (Basic Numerical Methods)	Advanced module	^M 9
Mathematics and Computer Science (Dept. 12), degree program "B.Sc. Economic Mathematics"	Elementary Stochastics	Advanced module	^M 9

The following modules can be used for Compulsory Elective Modules in Business Informatics

The current import opportunities as well as possible allocation regulations and restrictions are shown on the website for the degree program (§6[9]) or in the online module handbook linked there.

Mathematics and Computer Science (Dept. 12), degree program "B.Sc. Computer Science"	Design and Administration of Databases	Advanced module	6
	NoSQL Database Systems	Advanced module	6

	Distributed Data Management	Advanced module	9
Mathematics and Computer Science (Dept. 12), degree program "B.Sc. Business Informatics"	Agile and Classic Requirements Engineering	Advanced module	6
	Advanced module Core business systems	Advanced module	6
	Advanced Module Digital Transformation	Advanced module	6
	Advanced module Development and Operation of Information Systems	Advanced module	6
	Advanced module Information Management	Advanced module	6
	Advanced Module Model-Based Decision Support, Business Intelligence & Analytics	Advanced module	6
	Advanced module Process Management	Advanced module	6
	Advanced Module Knowledge Management and Collaborative Technologies	Advanced module	6
	Operational information systems	Advanced module	6
	Digital business models and processes	Advanced module	6
	Digitalization and integration in operational information systems	Advanced module	6
	Fundamental Technologies for IoT Data Generation of Physical and Nonphysical Sizes — IoT Sensor Systems	Advanced module	6
	Process and information modeling	Advanced module	6
Mathematics and Computer Science (Dept. 12), degree program "B.Sc. Economic Mathematics"	Optimization I	Advanced module	6

The following modules can be used for Practical and Seminar Modules

The current import opportunities as well as possible allocation regulations and restrictions are shown on the website for the degree program (§6[9]) or in the online module handbook linked there.

Economics (Dept. 02), degree program "M.Sc. Business Administration"	Seminar Advanced Management Accounting	Specialization module	AF 6
	Seminar Digitalization and Process Management	Specialization module	II 6
	Seminar Empirical Finance	Specialization module	AF 6
	Seminar Empirical Marketing	Specialization module	MU 6
	Seminar Entrepreneurship and Innovative Business Models	Specialization module	II 6
	Advanced Financing and Banking Seminar	Specialization module	AF 6
	Seminar Marketing Theory	Specialization module	MU 6
	Seminar Organization, Personnel and Knowledge Management	Specialization module	MU 6

	Seminar Accounting and Business Valuation	Specialization module	^{AF} 6
	Seminar Strategic and International Management	Specialization module	^{MU} 6
	Seminar Strategic and International Management (Project)	Specialization module	^{MU} 6
	Seminar Technology and Innovation Management	Specialization module	^{II} 6
Mathematics and Computer Science (Dept. 12), degree program "M.Sc. Computer Science"	Selected Advanced Topics in Computer Science (Seminar)	Profile module	3

Appendix 4: Export module list

The current export opportunities is always published on the program website of the department offering the module as an export opportunity.

Any prerequisites or recommendations for participation as well as combination rules must be observed. If the department offering a module has specified combination rules and created export packages, depending on the scope of their own import window, only limited module course offerings will in fact be available.

The degree programs listed below can be selected at the time of the adoption of these Degree Program and Examination Regulations. The catalog of export opportunities can be changed or supplemented by the examination committee especially if the export opportunities change. Such changes will be published by the examination committee on the degree program website in accordance with §6.

§1 Export of curricular modules to other degree programs

The following modules as listed in Appendix 2 may also be taken as part of other degree programs, as long as this is agreed upon with the department(s) in whose degree program(s) these modules are elective.

Name of module	
<i>German translation</i>	
Advanced Issues of Sales and Marketing	CS 633
<i>IT-Vertrieb und Marketing in einer digitalisierten Welt</i>	
Advanced Topics of Information Systems in Manufacturing	CS 675
<i>Ausgewählte Schwerpunkte der Wirtschaftsinformatik in der Fertigungsindustrie</i>	
Cloud Computing	CS 514
<i>Cloud Computing</i>	
Project Management for Software Development	CS 630
<i>Projektmanagement für Software-Entwicklungsprojekte</i>	
Specialization Module Business Systems	CS 634
<i>Vertiefungsmodul Betriebliche Kernsysteme</i>	
Specialization Module Design and Operation of Information Systems	CS 636
<i>Vertiefungsmodul Entwicklung und Betrieb von Informationssystemen</i>	
Specialization Module Digital Transformation	CS 635
<i>Vertiefungsmodul Digitale Transformation</i>	
Specialization Module Information Management	CS 637
<i>Vertiefungsmodul Informationsmanagement</i>	
Specialization Module Knowledge Management and Collaborative Technologies	CS 640
<i>Vertiefungsmodul Wissensmanagement und kollaborative Technologien</i>	
Specialization Module Model-based Decision Support, Business Intelligence & Analytics	CS 638
<i>Vertiefungsmodul Modellbasierte Entscheidungsunterstützung, Business Intelligence & Analytics</i>	
Specialization Module Process Management	CS 639
<i>Vertiefungsmodul Prozessmanagement</i>	