Second amendment dated February 19, 2025

Second amendment dated February 19, 2025 to the degree program and examination regulations for the degree program "Data Science" leading to the degree "Master of Science (M.Sc.)" at Philipps-Universität Marburg dated January 25, 2023 (Amt.Mit. 55/2023) in the version dated March 13, 2024 (Amt.Mit. 21/2024)

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The Departmental Council of the Department of "Mathematics and Computer Science" at Philipps-Universität Marburg in accordance with § 50 (1) of the Hessian Higher Education Act (HessHG) in the version of December 14, 2021 (GVBI, p. 931), last amended by Article 1 of the Act dated October 10, 2024 (GVBI. 2024 No. 56), has adopted the following amendment to the degree program and examination regulations on February 19, 2025:

Article 1

1. § 4 is amended as follows:

§ 4   Admission requirements
(1) The general admission requirement for the Master's degree program is proof of completion of a relevant Bachelor's degree program in the fields of Data Science, Mathematics or Computer Science or proof of a comparable domestic or foreign professionally qualifying university degree. The professionally qualifying university degree must have been passed with an overall grade of 3.2 or 7.3 grade points or better in accordance with § 28.
As part of the completed degree program or another degree program, a total of at least 72 LP must have been completed in modules from the scientific discipline of computer science and at least 18 LP in modules from the scientific discipline of mathematics. Of these, at least 9 LP must have been earned through acquiring competences from the module Machine Learning and at least 9 LP each through acquiring competences from at least 5 of the 7 modules: Object-Oriented Programming, Algorithms and Data Structures, System Software and Computer Communication, Efficient Algorithms, Basic Linear Algebra, and either Basic Real Analysis and Basics of Advanced Mathematics or Analysis I and Analysis II. It is strongly recommended that students acquire the competences from the above modules, which have not already been acquired, on their own responsibility before commencing their studies.
If no degree certificate with an overall grade is available by the application deadline yet, enrollment may be conditional. In the case of an underlying Bachelor's degree program with a scope of 180 credit points, the prerequisite is that proof of passed module examinations or partial module examinations amounting to at least 80% of the

credit points required for the relevant Bachelor's degree is provided. The proof must include an average grade determined on the basis of the graded module examinations and partial module examinations within the scope of the 80% of the credit points required for the Bachelor's degree. Enrollment can only take place subject to the proviso that all course work and examinations for the Bachelor's degree program have been completed before the start of the Master's degree program (deadline March 31 if the Master's degree program starts in the summer semester or deadline September 30 if the Master's degree program starts in the winter semester) and that proof of the degree certificate is submitted by the end of the lecture period of the first semester.

(2) The eligibility assessment committee appointed by the departmental council in accordance with § 3 of Appendix 5 "Special admission requirements" shall decide on the question of the relevance of the previous studies within the meaning of (1).

(3) The question of the comparability of the university degree within the meaning of (1) shall be decided by the eligibility assessment committee appointed by the departmental council in accordance with § 3 of Appendix 5 "Special admission requirements". The eligibility assessment committee also decides on the existence of the required credit points in accordance with (1) sentences 3 and 4.

(4) The modules and courses of the degree program are generally offered in English. A German-language offer is possible as an exception if all students of the module or course so wish. The coursework and examinations can be taken in either German or English at the student's discretion. Optional offers and compulsory elective areas may include import modules from Bachelor's degree programs or other departments in German, so that the choice may be limited here.
The special admission requirements are: Proof of either
   a) English language proficiency at least at level C1 of the "Common European Framework of Reference for Languages" by means of a language certificate from one of the following internationally recognized language examinations:

Language certificate	Result
International English Language Testing System (IELTS)[1]	7.0, 7.5, 8.0
Test of English as a Foreign Language (TOEFL)	
TOEFL iBT	95 - 120
TOEFL PBT	627 - 677
TOEFL ITP Level 1	627 - 677
Cambridge English Language Assessment[1]	Cambridge First Certificate in English + Grade A (FCE) Certificate of Advanced English + Grade B or C (CAE) Cambridge English: Business Higher (BEC Higher)
Pearson PTE Academic	76 - 84
Test of English for International Communication (TOEIC) [2]	
TOEIC Listening and Reading Test	945 - 990
TOEIC Speaking Test	180 - 200
TOEIC Writing Test	180 - 200

telc	telc C1 certificate
UNIcert	UNIcert III
Cambridge IGCSE [3]	
IGCSE 1st Language	with average C1
IGCSE 2nd Language	with average C1

[1]If the score and CEFR level are given at the same time, the CEFR level is always used.
[2]All 4 modules (possibly completed as a double module) must be provided for.
[3]All 4 individual examinations of the IGCSE 1st Language or the IGCSE 2nd Language must have been taken and passed.

or

b) English language proficiency at least at level B1 of the "Common European Framework of Reference for Languages" and German language proficiency at least equivalent to the "DSH-2" language examination.

(5) 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".

2. § 6 is amended as follows:

§ 6 Degree program: Structure, content, degree program curriculum and information

(1) The Master's degree program in "Data Science" is divided into the study areas Compulsory Elective Modules in Mathematics, Free Compulsory Elective Modules, Application Area Modules, Practical and Seminar Modules and Final Module.

(2) The degree program consists of modules that are assigned to the various study areas in accordance with (1). The following program structure results from the assignment of the modules, the degree to which they are compulsory and the calculated student workload in credit points (LP):

	Compulsory [PF] / Compulsory Elective [WP]	Credit points	Comment
Compulsory Elective Modules in Mathematics		*18*	
Forecasting: Theory and Practice *	WP	9	
Matrix Methods in Data Analysis*	WP	9	
Numerical Solution Methods for Finite Dimensional Problems*	WP	9	
Probabilistic Combinatorics*	WP	9	
Statistics and Statistical Learning *	WP	9	
Topological Methods in Data Analysis*	WP	9	

Free Compulsory Elective Modules*		***24-48***	
Data bionics	WP	$^I9$	
Data Science in Biomedicine	WP	$^I6$	At least 24 LP in computer science modules ("I")
Data Integration	WP	$^I6$	
Deep Learning	WP	$^I6$	
Explainable Artificial Intelligence	WP	$^I6$	
Generative AI	WP	$^I6$	
Introduction to Natural Language Processing	WP	$^I6$	
Information Retrieval	WP	$^I6$	
Temporal Data Mining	WP	$^I6$	
Import modules with content or methodological reference to the subject area of Data Science, ****	WP	$^{I, M}0\text{-}48$	
Application Area Modules*		***0 or 18-24***	One application area is optionally selectable****
Data Science in Biomedicine	WP	$^{MI}6$	
Introduction to Natural Language Processing	WP	$^S6$	
Modules according to Appendix 3 Import module list	WP	12-24	
Practical and Seminar Modules*		***24-27***	
Independent Scientific Practice Data Science	PF	9	
Project Work Data Science	PF	12	
Selected Advanced Topics in Computer Science / Data Science (Seminar)	WP	3	at least one module
Selected Advanced Topics in Mathematics / Data Science (Seminar)	WP	3	
Selected Advanced Topics in Computer Science (Seminar)*	WP	3	
Selected Advanced Topics in Mathematics A (Seminar)*	WP	3	
Final Module		***30***	
Master Thesis	PF	30	
Total		***120***	

* Import module according to. Appendix 3 Import module list.
** In the area of Free Compulsory Elective Modules, a maximum of 18 LP can be completed in advanced modules.
*** In the areas Free Compulsory Elective Modules, Application Area Modules and Practical and Seminar Modules, a total of 72 LP must be acquired.
**** The choice of an application area is made by registering for the first time for a module or for a coursework or examination in a module of the application area. "MI" = Medical Informatics, "S" = Languages, for further areas of application see Appendix 3.

(3) In the study area Compulsory Elective Modules in Mathematics, students expand their knowledge and competences in various applied mathematical disciplines according to their individual preferences.

(4) In the study area Free Compulsory Elective Modules, students can choose modules from computer science and mathematics according to their own interests, thereby deepening and broadening their competences and knowledge from the Bachelor's degree program and thus acquiring the necessary prerequisites for writing their Master's thesis.

(5) In the optional study area Application Area Modules, modules from an application area can be selected. The list of selectable application areas with the respective modules can be found in Appendix 3 or in the most up-to-date form on the website in accordance with (9). At the time of the adoption of these degree program and examination regulations, the following application areas are available for selection as application domains for the methods of data science: medical informatics, social sciences, geoinformatics and languages. On the one hand, the modules in this study area serve the acquisition of basic competences in the respective application domain. On the other hand, modules are also provided in which data analysis methods tailored to the domain are taught.

(6) In the study area Practical and Seminar Modules, students deepen their practice-oriented scientific skills and apply them. The essential competence for data scientists to carry out a research project in group work, usually with the development of extensive software, is practiced. In addition, one or two seminars are used to further develop their profile, whereby students learn to compare and evaluate research results. In the module Independent Scientific Practice Data Science, students learn and practice techniques for scientific work in data science. The module also prepares students for their Master's thesis and it is recommended that they complete it with the prospective advisor of their Master's thesis.

(7) The degree program is more research-oriented.

(8) The exemplary sequence of the modularized degree program is shown in the degree program curriculum (see Appendix 1).

(9) General information and regulations in their current form can be found on the degree program website at

   https://www.uni-marburg.de/de/fb12/studium/studiengaenge/m-sc-data-science

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

(10) The assignment of the individual courses to the modules of the degree program can be found in the course catalog of the Philipps-Universität Marburg, which is available on the university's website.

3. Appendix 2 is amended as follows:

Appendix 2:   Module list

Module name *German translation*	LP	Degree of obligation	Level	Qualification goals	Prerequisites for participation*	Requirements for the awarding of LP
Free Compulsory Elective Modules						
Data bionics *Datenbionik* CS 692	9	Compulsory elective module	Specializatio n module	The students - can present and apply common data-bionic methods, - can discuss the possibilities and limitations of natural analog information processing, - are able to design a solution using data bionic methods based on a specific problem, - are able to apply scientific working methods when independently recognizing, formulating and solving problems, - are able to speak freely about scientific content, both in front of an audience and in a discussion.	None.	Coursework: Reaching at least 50 percent of the points from the exercises to be completed each week and oral presentation of the solution to at least two of the exercises. Examination: Oral examination (individual examination) or written exam (*Klausur*)
Data Integration *Datenintegration* CS 671	6	Compulsory elective module	Specializatio n module	The students - can describe basic similarity measures for simple and complex data types (data matching), - can explain methods for metadata extraction and for determining data dependencies (data profiling), - can explain techniques for mapping, integrating and transforming schemas and their data (schema alignment), - can explain and use algorithms for recognizing and resolving duplicates and other data errors (entity resolution), - can explain the architecture and functionality of modern, integrated information systems, - can deal with heterogeneous, contaminated data and their integration, - are able to apply scientific working methods when independently recognizing, formulating and solving problems, - are able to speak freely about scientific content, both in front of an audience and in a discussion.	None. The competences taught in the module Algorithms and Data Structures and Database Systems are recommended.	Coursework: Reaching at least 50 percent of the points from the exercises to be completed each week and oral presentation of the solution to at least two of the exercises. Examination: Written exam (*Klausur*) or oral examination (individual examination)
Deep Learning CS 621	6	Compulsory elective module	Specializatio n module	The students - can explain the basics of deep neural networks and deep learning,	None.	Coursework: Reaching at least 50 percent of the points

Module name *German translation*	LP	Degree of obligation	Level	Qualification goals	Prerequisites for participation*	Requirements for the awarding of LP
				- can describe common techniques for optimization and regularization in deep learning, - can explain common architectures of deep neural networks, - can apply deep learning frameworks to implement solutions in an application area, - can identify new developments in the field of deep learning, - are able to apply scientific working methods to independently identify, formulate and solve problems.	The competences taught in the modules Machine Learning and either Fundamentals of Statistics or Elementary Stochastics are recommended.	from the exercises to be completed each week and oral presentation of the solution to at least two of the exercises. Examination: Written exam (*Klausur*) or oral examination (individual examination)
CS 656 **Explainable Artificial Intelligence** *Explainable Artificial Intelligence*	6	Compulsory elective module	Specialization module	The students - are able to describe the core concepts of explanations and identify different explanation techniques, - can decide when explanations should be used and select the appropriate methods, - can apply explanation techniques to a variety of machine learning tasks with different types of data, - can evaluate explanations.	None. Knowledge of machine learning, especially neural networks and backpropagation, and programming in Python is recommended.	Coursework: Reaching at least 50 percent of the points from the weekly exercises to be completed and oral presentation of the solution to at least two of the exercises. Examination: Oral examination (individual examination) or written exam (*Klausur*)or written elaboration
CS 622 **Generative AI**	6	Compulsory elective module	Specialization module	The students - can explain the basics of generative models, - can demonstrate the areas of application of generative models and assess their limitations, - can design and implement modern generative models, - can use generative AI in practice and reflect on and critically analyze the results - can comment on the ethical and social challenges of generative AI, - are able to apply scientific working methods when independently recognizing, formulating and solving problems.	None. The competences taught in the modules Machine Learning and either Fundamentals of Statistics or Elementary Stochastics are recommended.	Coursework: Reaching at least 50 percent of the points from the weekly exercises to be completed and oral presentation of the solution to at least two of the exercises. Examination: Written exam (*Klausur*) or oral examination (individual examination)

Module name *German translation*	LP	Degree of obligation	Level	Qualification goals	Prerequisites for participation*	Requirements for the awarding of LP
CS 572 **Information Retrieval** *Information Retrieval*	6	Compulsory elective module	Specialization module	The students - can describe the most important models for information retrieval, - can explain the architecture of IR systems, - can name indexing techniques, - can describe the optimization of queries in IR, - can apply IR in the area of web and multimedia, - can apply scientific working methods (recognizing, formulating, solving problems, training the ability to abstract), - are able to speak freely about scientific content, both in front of an audience and in a discussion.	None. The competences taught in the module Algorithms and Data Structures are recommended.	Coursework: Reaching at least 50 percent of the points from the weekly exercises to be completed and oral presentation of the solution to at least two of the exercises. Examination: Oral examination (individual examination) or written exam (*Klausur*)
CS 691 **Temporal Data Mining** *Temporales Data Mining*	6	Compulsory elective module	Specialization module	The students - can explain and apply scientific procedures in the investigation of time series in order to discover new and previously unknown temporal patterns, - can describe and compare the most important analysis methods such as Fourier and wavelet analysis, - can explain statistical modeling options for time series, - can apply methods to generate symbolic pattern descriptions from time series, - can apply scientific working methods (recognizing, formulating, solving problems, training the ability to abstract), - are able to speak freely about scientific content, both in front of an audience and in a discussion.	None. The competences taught in the modules Object-Oriented Programming and Algorithms and Data Structures are recommended.	Coursework: Reaching at least 50 percent of the points from the exercises to be completed each week and oral presentation of the solution to at least two of the exercises. Examination: Oral examination (individual examination) or written exam (*Klausur*)

Free Compulsory Elective Modules *and* Application Area Modules

Module name *German translation*	LP	Degree of obligation	Level	Qualification goals	Prerequisites for participation*	Requirements for the awarding of LP
CS 544 **Data Science in Biomedicine** *Data Science in Biomedizin*	6	Compulsory elective module	Specialization module	The students - can explain the most important methods from the field of biomedical data science that are required for calculations in the natural sciences, - have understood these methods and are able to select, carry out and implement suitable methods for specific case studies.	None. The competences taught in the modules Machine Learning and either Fundamentals of Statistics or Elementary Stochastics are recommended.	Coursework: Reaching at least 50 percent of the points from the weekly exercises to be completed and oral presentation of the solution to at least two of the exercises. Examination: Oral examination

Module name *German translation*	LP	Degree of obligation	Level	Qualification goals	Prerequisites for participation*	Requirements for the awarding of LP
						(individual examination) or written exam (*Klausur*)
CS 539 **Introduction to Natural Language Processing** *Einführung in die natürliche Sprachverarbeitung (NLP)*	6	Compulsory elective module	Specialization module	The students - can describe the technical perspective on Natural Language Processing (NLP), i.e. the field of artificial intelligence that deals with the processing and understanding of human language, - can explain methods for developing computer software that understands and processes human language, - can explain modern data-driven approaches, with a focus on machine learning techniques, - can apply their knowledge in group work on real NLP projects, - are able to develop their own systems that interpret written language. The applications covered vary in complexity and include, for example, entity recognition, sentiment analysis, semantic similarity and question answering.	None. Competences as taught in the modules Machine Learning and either Fundamentals of Statistics or Elementary Stochastics are recommended.	Coursework: Reaching at least 50 percent of the points from the exercises to be completed each week and oral presentation of the solution to at least two of the exercises. Two partial examinations: Written exam (*Klausur*) (3 LP) and written elaboration (3LP)
Practical and Seminar Modules						
CS 695 **Independent Scientific Practice Data Science** *Selbstständiges wissenschaftliches Arbeiten Data Science*	9	Compulsory module	Profile module	The students - are able to independently review and expand their knowledge in a scientific field from the field of data science on the basis of recommended literature and to familiarize themselves with the current state of research, - can carry out literature searches using subject-specific methods, - are able to use systems that support scientific work in the field of the master's thesis.	None. The competences taught in the advanced and specialization modules are recommended.	Examination: Written elaboration ***Ungraded module***
CS 694 **Project Work Data Science** *Projektarbeit Data Science*	12	Compulsory module	Practical module	The students - can work on a comprehensive task from computer science / data science in a team of several students. This includes Developing, adapting, extending and developing problem-relevant methods - can plan and carry out the modeling and processing of data as part of a project, - can learn, plan and work independently, - are practiced in project management and monitoring methods, e.g.: target descriptions, planning, milestones, record keeping, deadlines, delegation, controlling,	None.	Examination: Software creation (the term software includes all artifacts created, in particular the program code, planning documents, user and developer manuals and presentation material). ***Ungraded module***

Module name *German translation*	LP	Degree of obligation	Level	Qualification goals	Prerequisites for participation*	Requirements for the awarding of LP
				- have team-related social skills: Cooperation, team development, leadership, motivation, well-structured team of employees, working under deadline pressure, - are proficient in methods of documentation and presentation of IT projects for users and third parties in the form of program documentation, project reports and, if applicable, publications.		
CS 611 **Selected Advanced Topics in Computer Science / Data Science ("Seminar")** *Ausgewählte fortgeschrittene Themen der Informatik / Data Science („Seminar")*	3	Compulsory elective module	Profile module	The students - are able to work independently on a special topic of computer science / data science, - can work independently and in an advanced scientific manner in this field, - are able to prepare and divide up contexts in computer science / data science and supplement them with explanatory content, - can deal with scientific literature and its search, - can give a structured presentation tailored to the skills of the audience, - can handle presentation media in an advanced manner, - can lead structured discussions in groups on computer science topics.	None. Previous knowledge is recommended, depending on the subject specialization of the seminar, but generally knowledge from the basic modules of Computer Science and Mathematics.	<u>Two partial examinations:</u> Seminar presentation (weighting: 1 LP) Written paper (weighting: 2 LP)
CS 617 **Selected Advanced Topics in Mathematics / Data Science ("Seminar")** *Ausgewählte fortgeschrittene Themen der Mathematik / Data Science („Seminar")*	3	Compulsory elective module	Profile module	The students - are able to work independently on a special mathematical topic, - can work independently and in an advanced scientific manner in this area, - are able to prepare and divide up mathematical contexts and supplement them with explanatory content, - can deal with scientific literature and its search, - can give a structured presentation tailored to the skills of the audience, - can handle presentation media in an advanced manner, - can lead structured discussions on mathematical content in groups, - can use mathematical typesetting programs.	None.	<u>Two partial examinations:</u> Seminar presentation Written elaboration ***Ungraded module***
Final Module						
CS 696 **Master Thesis** *Masterarbeit*	30	Compulsory module	Final module	Students are able to work on a comprehensive task from the field of data science using scientific methods under supervision and to present a thesis and the results contained therein appropriately in writing and orally.	At least 66 LP must have been acquired.	<u>Two partial examinations:</u> Master's thesis (weighting: 27 LP) and

Module name *German translation*	LP	Degree of obligation	Level	Qualification goals	Prerequisites for participation*	Requirements for the awarding of LP
						disputation (weighting: 3 LP).

* Module references in the column "Prerequisites for participation" were translated from German automatically. For originial module names, please refer to the original Degree Program and Examination Regulations published in Amtliche Mitteilungen der Philipps-Universität Marburg (No. 25/2025) on April 10, 2025.

4. Appendix 3 is amended as follows:

Appendix 3:   Import module list

The module offerings listed below can be selected at the time of the resolution on these degree program and examination regulations. In accordance with § 14 (1) General Regulations, these modules are subject to the specifications of the degree program and examination regulations within which the modules are offered (in particular with regard to qualification objectives, prerequisites, credit points and ex-amination modalities). The possible combinations of modules may be determined by the teaching unit offering them.

The catalog of selectable offerings can be changed or supplemented by the examination committee, especially if the range of offerings provided by the departments at Philipps-Universität Marburg changes. Such changes will be published by the examination committee on the respective degree program website. In individual cases or in general, taking up the offerings listed below may be subject to prior study counseling or binding registration. In the event of capacity restrictions, the relevant provisions of the degree program and examina-tion regulations apply. Otherwise, no guarantee is given that the offerings listed below will actually be provided and can be attended.

Upon justified application by the student, it is permissible to approve additional import modules beyond the regular offer in individual cas-es; this requires the consent of the department or institution providing the offerings.

The current import offerings are published as an export offer on the program website of the department offering the module.

Students should take advantage of the relevant information and advisory services offered by the department offering the mod-ule before taking up the offering.

Any participation requirements or recommendations as well as combination rules must be observed. If the module provider has specified combination rules and created export packages, there is effectively only a limited range of modules available, depending on the scope of your own import window.

The import module list in its current form can be found on the degree program website at https://www.uni-marburg.de/de/fb12/studium/studiengaenge/m-sc-data-science.

Appendix 5: Special admission requirements and eligibility assessment process

§ 1 Special admission requirements

(1) Admission to the Master's degree program "Data Science" is only possible if the general admission requirements of § 4 of the degree program and examination regulations are met.

(2) In addition, applicants must have proven their personal subject-related aptitude as part of an eligibility assessment process to be carried out in accordance with the following requirements.

§ 2 Application for participation in the eligibility assessment process

The application must be submitted on the form provided by the University. The application must be accompanied by the following documents:

1. Proof of a completed relevant Bachelor's degree or at least an equivalent domestic or foreign university degree or proof of the preliminary overall grade from the credits completed up to that point in accordance with § 4 (1) of the degree program and examination regulations.
2. If an academic final thesis amounting to at least 10 credit points has already been completed in the relevant Bachelor's degree program or at least an equivalent degree program in Germany or abroad in accordance with § 4 (1) of the degree program and examination regulations, proof of this thesis and its scope must be enclosed. If such a thesis has not yet been completed, but is either mandatory in the examination regulations of the relevant Bachelor's degree program or an optional thesis has been bindingly registered, proof of this and the scope of the thesis must be provided in a suitable manner.
3. Proof of the competences specified in § 4 (1) sentences 3 and 4 of the degree program and examination regulations.
4. Proof of knowledge of German and/or English in accordance with § 4 (4) of the degree program and examination regulations.
5. Completely and truthfully filled out form, which was created using the web application provided on the degree program website and which contains in-formation about the modules completed so far and their scope as well as, if applicable, about the preparation of a final thesis and any language certificates acquired.

§ 3 Eligibility assessment committee

(1) The eligibility assessment process to determine personal aptitude for the subject is the responsibility of the eligibility assessment committee appointed by the departmental council.

(2) The committee shall be composed of at least two professors.

(3) The eligibility assessment committee shall report to the departmental council of the department on its experiences after completion of the process and make proposals for the further development of the process.

§ 4 Eligibility assessment process
(1) Anyone who has submitted an application in accordance with § 2 shall take part in the eligibility assessment process. Applications that are not complete, in due form or on time will not take part in the eligibility assessment process. Anyone who provides incomplete information in the form in accordance with § 2 no. 5 with regard to the credits received shall not be entitled to have any additional credits considered. Anyone who claims credits that have not been completed or who provides false and misleading information in the form in accordance with § 2 no. 5 is not entitled to ad-mission.

(2) Aptitude is determined on the basis of the following criteria:

   a) Overall grade in accordance with § 2 no. 1: Points are awarded for the overall grade in the following manner:
   Grade points 15.0 to 12.7 (decimal grade 0.7 to 1.4) = 55 points
   Grade points 12.6 to 10.0 (decimal grade 1.5 to 2.3) = 45 points
   Grade points 9.9 to 7.3 (decimal grade 2.4 to 3.2) = 35 points.
   The information is based on the grading scale according to § 28 General Regulations of Philipps-Universität Marburg.

   b) Completion of an academic final thesis as part of the relevant Bachelor's degree program or at least equivalent domestic or foreign university degree program in accordance with § 4 (1) of the degree program and examination regulations:
   - Proof that an academic thesis worth at least 10 credit points is compulsory in the qualifying Bachelor's degree program or that a corresponding optional thesis has already been completed or has been bindingly registered (10 points).

   c) Proof of knowledge in accordance with § 4 (1) sentence 4 of the degree program and examination regulations:

   - The eligibility assessment committee determines that competences amounting to at least 9 LP each have been acquired from 7 of the 7 modules in accordance with § 4 (1) Sentence 4 (35 points).
   - The eligibility assessment committee determines that competences amounting to at least 9 LP each have been acquired from 6 of the 7 modules in accordance with § 4 (1) sentence 4 (20 points).

(3) A prerequisite for admission to the degree program is an assessment of the degree of aptitude of at least 65 out of a possible 100 points.

(4) A report must be made of the main criteria that led to the result of the assessment in § 4 (2).

§ 5 Completion of the process
(1) Applicants who are admitted shall receive a written letter of admission from the university. This will specify a deadline by which the applicant must enroll. If enrollment is not completed by the deadline, the letter of admission shall become invalid.

(2) Applicants who are not admitted shall receive a letter of rejection. Rejected applicants may reapply for participation in the eligibility assessment process, provided that further relevant credits have been received since the last application.

Article 2

With the exception of the changes in § 4 and Appendix 5: Special admission requirements and eligibility assessment process, the second amendment applies from winter semester 2025/2026 to all students studying in the degree program "Data Science" leading to the degree "Master of Science (M.Sc.)" at Philipps-Universität Marburg from 25 January 2023.

Completed and ongoing module examination procedures are not affected; modules that were started before the winter semester 2025/2026 must be completed in accordance with the regulations of January 25, 2023, as amended.

The changes in § 4 and in Appendix 5: Special admission requirements and eligibility assessment process apply to all students who have started their studies in the Master's degree program "Data Science" leading to the degree "Master of Science (M.Sc.)" from winter semester 2025/26.

The amendment comes into force on the day after its publication in the Amtliche Mitteilungen der Philipps-Universität Marburg.

Marburg, April 08, 2025

signed.

Prof. Dr. István Heckenberger
Deputy Dean of the Department of
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