TUD Dresden University of Technology
Faculty of Computer Science
Faculty of Mathematics
Center for Molecular and Cellular Bioengineering (CMCB)

Second Amendment to the Study Regulations for the consecutive Master's Degree Program Computational Modeling and Simulation

as of #date (format: Month DD, YYYY)#

On the basis of § 37 para. 1 of the Saxon Higher Education Act (SächsHSG) in the version published on May 31, 2023 (SächsGVBl. p. 329) TUD Dresden University of Technology issues the following amending statutes:

Article 1
Amendment to the Study Regulations

The Study Regulations for the consecutive Master's Degree Program Computational Modeling and Simulation of April 20, 2018 (Official Announcement of TU Dresden No. 09/2018 of May 5, 2018, p. 2), amended most recently by the statutes of February 12, 2020 (Official Announcements 04/2020 of March 11, 2020, p. 20) are amended as follows:

1st § 2 para. 1 number 6 shall be amended as follows:
„6. Track “Applied Artificial Intelligence”: complex systems involving hardware and software, as well as robotic systems.

2nd § 7 para. 3 number 6 shall be amended as follows:
„6. Track Applied Artificial Intelligence: Machine learning, machine learning hardware, computer vision, computer vision optics and electronics, medical imaging, robotics, robotics in medicine, hardware-software co-design, symbolic, logic-based and explainable artificial intelligence, data science, databases or high-performance computing.”

3rd Attachment 1 shall be amended as follows:

a) In the module descriptions for the modules Machine Learning and Data Mining, Parallel Programming and High-Performance Computing, Basic Numerical Methods, Stochastics and Probability, Data Visualization, Statistical Principles and Experimental Design, Database Management and Scientific Software Engineering, the word “ten” shall be replaced by the word “eight” and the word “nine” by the word “seven” wherever applicable.

b) The module descriptions for the Foundations of Artificial Intelligence and Knowledge Models modules shall be deleted.

c) The module description for the module Introduction to Biochemistry shall be amended as follows:

aa) The second and third sentences of the requirements for awarding credit points shall be amended as follows: “The module examination comprises a 90-minute written test and a practical course report lasting 24 hours. If fewer than 15 students have registered by the end of the registration period, the written exam may be replaced by an individual oral exam lasting 20 minutes; registered students will be notified of this at the end of the registration period.”

bb) The second sentence of the module description regarding credit points and grades shall be amended as follows: “The module grade is calculated from the weighted average

grade of the examined assessments. The written exam or the oral exam shall be weighted twice and the practical course report shall be weighted once."

d) In the module description of the Finite Element Methods module, the words "and of the Computational Engineering track" will be deleted in the first sentence of the description.
e) The module description for the Resource Economics and Environmental Policy module shall be amended as follows:
   aa) The third sentence regarding the requirements for awarding credit points shall be deleted.
   bb) In sentence 2 regarding credit points and grades, the words "oral examination" shall be replaced by the word "project work".
f) In the module description of the Multibody Dynamics module, in the second sentence of the requirements for awarding credit points, the figure "90" shall be replaced by the figure "120".
g) The module descriptions for the Foundations of Logical Modeling, Models of Computation, Artificial Intelligence, Advanced Logical Modeling and Logical Modeling Team Project modules shall be deleted.
h) The module descriptions for the following modules Computer Vision, Robot Learning, Touch Sensing and Processing, Digital Circuit Technology, Deep Neural Network Hardware, Advanced Applied Artificial Intelligence, Applications of Applied Artificial Intelligence and Applied Artificial Intelligence Team project shall be added and shall be in the versions shown in the attachment to these amended statutes.

4th Attachment 2 shall be amended in accordance with the Appendix to this Amendment Statute.

Article 2
Entry into force, Publication and Interim Regulations

(1) This Amendment Statute shall enter into force on April 1, 2025 and shall be published in the official announcements of TUD Dresden University of Technology.

(2) It shall apply to all newly enrolled students in the Master's degree program in Computational Modeling and Simulation in the 2025/2026 winter semester or later.

(3) For students enrolled earlier than in the 2025/2026 winter semester, the previously valid Study Regulations for the Master's degree program in Computational Modeling and Simulation shall continue to apply.

(4) It shall apply from the 2026/2027 winter semester for all students enrolled in the Master's degree program in Computational Modeling and Simulation.

(5) If students switch to the new regulations, primarily the module examinations already taken including the grades, and subordinately also individual examination achievements will be transferred ex officio on the basis of equivalence tables which have been determined by the Examination Committee and announced in the usual manner. With the exception of § 15 para. 5 of the examination regulations, module examinations and examined assessments not graded with at least "pass" (4.0) or "passed" will not be transferred. The module grade is generally not recalculated based on exclusively transferred examined assessments; exceptions are listed in the equivalence tables.

Issued on the basis of the resolution of the Faculty Board of the Faculty of Computer Science dated January 15, 2025, the Faculty of Mathematics dated January 15, 2025, and the resolution of

the Scientific Council of the Center for Molecular and Cellular Bioengineering (CMCB) dated January 15, 2025, and approved by the University Executive Board on #date (format: Month DD, YYYY)#.

Dresden, #date (Format: Month DD, YYYY)#

The Rector
of TUD Dresden University of Technology

Prof. Ursula Staudinger