

## OFFICIAL TRANSLATION OF

**„Neufassung der Satzung über besondere  
Zugangsvoraussetzungen für die Studiengänge  
der Fakultät für Mathematik, Informatik und  
Naturwissenschaften vom 1. März und 5. April 2017“  
(Amtliche Bekanntmachung Nr. 44 vom 24. Mai 2017)**

**THIS TRANSLATION IS FOR INFORMATION ONLY—  
ONLY THE GERMAN VERSION SHALL BE LEGALLY  
VALID AND ENFORCEABLE!**

### **Revised Bylaws Regarding the Special Conditions of Admission for Degree Programs in the Faculty of Mathematics, Informatics and Natural Sciences**

**dated 1 March and 5 April 2017**

On 3 May 2017 in accordance with Section 108 subsection 1 of the Hamburg higher education act (Hamburgisches Hochschulgesetz, HmbHG) dated 18 July 2001 (HmbGVBl. p. 171) and last amended on 16 November 2016 (HmbGVBl. p. 472), the Executive University Board of Universität Hamburg ratified the Revised Bylaws Regarding the Special Conditions of Admission for Degree Programs in the Faculty of Mathematics, Informatics and Natural Sciences that were adopted by the Faculty Council of the Faculty of Mathematics, Informatics and Natural Sciences on 1 March and 5 April 2017.

#### **Section 1**

#### **Special conditions of admission**

##### **A. Bachelor's degree programs**

##### **1. Bachelor of Science in Business Mathematics**

The following special conditions for admission shall apply to the Bachelor of Science in Business Mathematics:

Sufficient proficiency in English is required for the Bachelor of Science in Business Mathematics in order to reasonably understand course instruction and specialist

literature (at least Level B1 of the Common European Framework of Reference for Languages (CEFR)). English proficiency may be demonstrated with any of the following:

- a) At least 42 points on the TOEFL Internet-based test
- b) A score of at least 4.0 on the IELTS test
- c) A higher education entrance qualification for English-language higher education institutions
- d) Academic transcripts of equivalent quality

With respect to academic transcripts of equivalent quality, in particular proof of a German higher education entrance eligibility evincing at least three years of English instruction at school is recommended.

## **B. Master's degree programs**

### **1. Master of Science in Informatics**

The following special conditions for admission shall apply to the Master of Science in Informatics:

A consecutive bachelor's degree in informatics from the Faculty of Mathematics, Informatics and Natural Sciences or a comparable degree program, or a bachelor's degree from another degree program, provided that applicants can substantiate at least 18 ECTS credits of completed coursework in mathematics and 72 ECTS credits in informatics comparable to the curriculum of the consecutive bachelor's degree program.

### **2. Master of Science in Bioinformatics**

The following special conditions for admission shall apply to the Master of Science in Bioinformatics:

A bachelor's or comparable degree in a natural science, computer science, or medical-oriented subject, in which at least 5 ECTS credits for each of at least three of the following subjects was earned:

- a) Chemistry
- b) Biochemistry and/or molecular biology
- c) Software development/programming
- d) Algorithms and data structures or information systems
- e) Methodological-oriented bioinformatics or cheminformatics

### **3. Master of Science in Geophysics**

The following special conditions for admission shall apply to the Master of Science in Geophysics:

3.1 A consecutive bachelor's degree in geophysics/oceanography from the Faculty of Mathematics, Informatics and Natural Sciences or a comparable degree program, or a

bachelor's degree from another mathematics- and physics-based degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the consecutive bachelor's degree program in geophysics/oceanography. Of these 90 ECTS credits, at least 45 must come from mathematics and physics courses.

3.2 Sufficient proficiency in English is required for the Master of Science in Geophysics in order to reasonably understand the technical language and specialist literature. Commensurate English proficiency means at least three years of instruction at a comprehensive school (comprehensive school transcripts or comparable proof of pertinent language skills).

#### **4. Master of Science in Meteorology**

The following special conditions for admission shall apply to the Master of Science in Meteorology:

4.1 A consecutive bachelor's degree in meteorology from the Faculty of Mathematics, Informatics and Natural Sciences or a comparable degree program, or a bachelor's degree from another mathematics- and physics-based degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the consecutive bachelor's degree program in meteorology.

4.2 Sufficient proficiency in English is required for the Master of Science in Meteorology in order to reasonably understand the technical language and specialist literature. Commensurate English proficiency means at least three years of instruction at a comprehensive school (comprehensive school transcripts or comparable proof of pertinent language skills).

#### **5. Molecular plant science**

The following special conditions for admission shall apply to the Master of Science in Molecular Plant Science:

5.1 A bachelor's degree either in

- a) Biology or
- b) Molecular life sciences

from the Faculty of Mathematics, Informatics and Natural Sciences at Universität Hamburg

or

5.2 Any other bachelor's degree, provided that applicants substantiate that at least 74 ECTS credits (CP) of foundational coursework in the natural sciences has been completed in the following disciplines:

- a) Mathematics (incl. physics and bioinformatics, if available) 6 ECTS credits
- b) Chemistry (general, inorganic, organic, and physical chemistry as well as

biochemistry) 8 ECTS credits

c) Biology 60 ECTS credits

Within these foundation courses, 30 ECTS credits must demonstrate knowledge of laboratory practice and skills in chemistry and biology acquired in laboratory internships. Any credits lacking in mathematics and chemistry may be compensated through corresponding credits earned in molecular biology. These credits must be earned in addition to the 60 ECTS credits in biology. Furthermore, the final thesis must be an experimental project. This information must be evident from the documentation submitted. Where necessary, applicants may submit a separate letter detailing this information.

5.3 Applicants must have adequate English-language skills. Adequate language proficiency may be demonstrated as follows:

a) CEFR / TELC B2 (seven years of English instruction at a state, state-accredited, or state-licensed school in Germany shall be considered equivalent)

b) IELTS Academic 5.0

c) TOEFL (IBT 80, PBT 500, CBT 170)

d) Cambridge FCE, CAE, or CPE

e) A degree from an English-language bachelor's degree program

## **6. Master of Science in Wood Science**

The following special conditions for admission shall apply to the Master of Science in Wood Science:

A consecutive bachelor's degree in wood science from Universität Hamburg or a comparable degree from another higher education institution, or another bachelor's degree wherein at least 75 ECTS credits of examination performance may receive credit in a bachelor's degree program in wood science.

## **7. Master of Science in Physics**

The following special conditions for admission shall apply to the Master of Science in Physics:

A consecutive bachelor's degree in physics from Universität Hamburg or a comparable degree program at another higher education institution, or a bachelor's degree from another mathematics- and physics-based degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the consecutive bachelor's degree program in physics.

## **8. Master of Science in Biology**

The following special conditions for admission shall apply to the Master of Science in Biology:

A consecutive bachelor's degree in biology from Universität Hamburg or a comparable degree program, or a bachelor's degree from another degree program, provided that

applicants can substantiate at least 60 ECTS credits of completed coursework in biosciences comparable to the curriculum of the consecutive bachelor's degree program.

#### **9. Master of Science in Marine Ecosystem and Fisheries Science**

The following special conditions for admission shall apply to the Master of Science in Marine Ecosystem and Fisheries Science:

A consecutive bachelor's degree in biology from Universität Hamburg or a comparable degree program, or a bachelor's degree from another degree program, provided that applicants can substantiate at least 60 ECTS credits of completed coursework in biology comparable to the curriculum of the consecutive bachelor's degree program.

#### **10. Master of Science in Ocean and Climate Physics**

The following special conditions for admission shall apply to the Master of Science in Ocean and Climate Physics:

10.1 A consecutive bachelor's degree in geophysics or oceanography from Universität Hamburg or a comparable degree program at another higher education institution, or a bachelor's degree from another mathematics- or physics-based degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the consecutive bachelor's degree program in geophysics/oceanography.

10.2 Sufficient proficiency in English is required for the Master of Science in Ocean and Climate Physics in order to reasonably understand the technical language and specialist literature. Commensurate English proficiency means at least three years of instruction at a comprehensive school (comprehensive school transcripts or comparable proof of pertinent language skills).

#### **11. Master of Science in Chemistry**

The following special conditions for admission shall apply to the Master of Science in Chemistry:

11.1 A bachelor's degree in chemistry from Universität Hamburg or a comparable degree program.

11.2 In special cases, admission may be possible in contravention of the requirements set forth in 11.1 (where appropriate, subject to specific conditions), provided that an applicant has a bachelor's degree and can substantiate supplemental practical experience related to chemistry (e.g., pertinent internships, professional experience, or work produced). The selection committee for the Master of Science in Chemistry shall render a decision in such a case.

11.3 Applicants must have adequate English-language skills. Adequate language proficiency may be demonstrated as follows:

- a) CEFR / TELC B2 (five years of English instruction at a state-accredited or state-licensed school in Germany shall be considered equivalent)
- b) IELTS 5.0
- c) TOEFL (IBT 80, PBT 500, CBT 170)
- d) Cambridge FCE, CAE, or CPE
- e) Degree from an English-language bachelor's degree program
- f) A higher education entrance eligibility received in a program taught in English

### **12. Master of Science in Molecular Life Sciences**

The following special conditions for admission shall apply to the Master of Science in Molecular Life Sciences:

12.1 A bachelor's degree in molecular life sciences from Universität Hamburg or a comparable degree program, or a bachelor's degree from another degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework, which is comparable to the curriculum of the bachelor's degree program in molecular life sciences.

12.2 In special cases, admission may be possible in contravention of the requirements set forth in 12.1 (where appropriate, subject to specific conditions), provided that an applicant has a bachelor's degree and can substantiate that at least 70 ECTS credits are comparable to the curriculum of the bachelor's degree program in molecular life sciences at Universität Hamburg as well as practical experience especially related to the degree program (e.g., pertinent internships, professional experience, or work produced). The selection committee for the Master of Science in Molecular Life Sciences shall render a decision in such a case.

12.3 Applicants must have adequate English-language skills. Adequate language proficiency may be demonstrated as follows:

- a) CEFR / TELC B2 (five years of English instruction at a state, state-accredited, or state-licensed school in Germany shall be considered equivalent)
- b) IELTS 5.0
- c) TOEFL (IBT 80, PBT 500, CBT 170)
- d) Cambridge FCE, CAE, or CPE
- e) A degree from an English-language bachelor's degree program,
- f) A higher education entrance eligibility received in a program taught in English

### **13. Master of Science in Mathematics**

The following special conditions for admission shall apply to the Master of Science in Mathematics:

13.1 A bachelor's degree in mathematics or business mathematics from Universität Hamburg or a comparable degree program at another higher education institution, or a bachelor's degree from another mathematics degree program,

provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the consecutive bachelor's degree program in mathematics.

13.2 Sufficient proficiency in English is required for the Master of Science in Mathematics in order to reasonably understand course instruction and specialist literature. English proficiency may be demonstrated with any of the following:

- a) A degree from an English-language degree program
- b) TOEFL: 450 points on the written test, 130 points on the computer-based test, or 78 points on the Internet-based test
- c) IELTS test with a score of at least 4.5
- d) A higher education entrance qualification for English-language higher education institutions
- e) A six-month stay in an English-speaking country
- f) Proof of a German higher education entrance eligibility evincing at least five years of English instruction at school or other proof of comparable quality

#### **14. Master of Science in Mathematical Physics**

The following special conditions for admission shall apply to the Master of Science in Mathematical Physics:

14.1 A bachelor's degree in mathematics (with physics as a supplementary subject) or a bachelor's degree in physics from Universität Hamburg or a comparable degree program at another higher education institution, or a bachelor's degree from another mathematics or physics degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the bachelor's degree program in mathematics or physics.

14.2 Sufficient proficiency in English is required for the Master of Science in Mathematical Physics in order to reasonably understand course instruction and specialist literature. English proficiency may be demonstrated with any of the following:

- a) A degree from an English-language degree program
- b) TOEFL: 450 points on the written test or 130 points on the computer-based test
- c) IELTS test with a score of at least 4.5
- d) A higher education entrance qualification for English-language higher education institutions
- e) A six-month stay in an English-speaking country
- f) Academic transcripts of equivalent quality

With respect to academic transcripts of equivalent quality, in particular proof of a German higher education entrance eligibility evincing at least five years of English instruction at school is recommended.

### **15. Master of Science in Industrial Mathematics**

The following special conditions for admission shall apply to the Master of Science in Industrial Mathematics:

15.1 A BSc degree in one of the following degree programs: mathematics (with technology, physics, or informatics as a supplementary subject) from Universität Hamburg, industrial mathematics from Hamburg University of Technology, or a comparable degree program at another higher education institution.

15.2 A BSc degree in engineering (with mathematics as an area of concentration) from Hamburg University of Technology or a comparable degree program at another higher education institution.

15.3 A BSc from another mathematics or technology bachelor's degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the bachelor's degree program in industrial mathematics, mathematics, or engineering with an area of concentration in mathematics.

15.4 Sufficient proficiency in English is required for the Master of Science in Industrial Mathematics in order to reasonably understand course instruction and specialist literature. English proficiency may be demonstrated with any of the following:

- a) A degree from an English-language degree program
- b) TOEFL: 450 points on the written test, 130 points on the computer-based test, or 78 points on the Internet-based test
- c) IELTS test with a score of at least 4.5
- d) A higher education entrance qualification for English-language higher education institutions
- e) A six-month stay in an English-speaking country
- f) Academic transcripts of equivalent quality

With respect to academic transcripts of equivalent quality, in particular proof of a German higher education entrance eligibility evincing at least five years of English instruction at school is recommended.

### **16. Master of Science in Business Mathematics**

The following special conditions for admission shall apply to the Master of Science in Business Mathematics:

A bachelor's degree in business mathematics, mathematics (with business administration or economics as a supplementary subject), business administration, or economics from Universität Hamburg or a comparable degree program at another higher education institution, or a bachelor's degree from another mathematics or economics degree program. In any event, applicants must substantiate at least 60 ECTS credits of completed coursework in mathematics courses and at least 20 ECTS credits of completed coursework in economics courses.



### **17. Master of Science in Information Systems**

The following special conditions for admission shall apply to the Master of Science in Information Systems:

17.1 A bachelor's degree in information systems from Universität Hamburg or a comparable degree program, or a bachelor's degree from another degree program, provided that applicants can substantiate at least 30 ECTS credits of completed coursework in both economics and informatics courses comparable to the curriculum of the bachelor's degree program in information systems.

17.2 An applicant's affirmation that he/she has sufficient knowledge of English to follow classes in English, read specialist literature, and take attendant oral and written examinations in English, as circumstances require.

### **18. Master of Science in Geosciences**

The following special conditions for admission shall apply to the Master of Science in Geosciences:

A bachelor's degree in geosciences from Universität Hamburg or a comparable degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses comparable to the curriculum of the consecutive bachelor's degree program in geosciences.

### **19. Master of Science in Integrated Climate System Sciences**

The following special conditions for admission shall apply to the Master of Science in Integrated Climate System Sciences:

19.1 A consecutive bachelor's degree in geophysics/oceanography or meteorology from the Faculty of Mathematics, Informatics and Natural Sciences at Universität Hamburg or a bachelor's degree from another mathematics, physics, and natural science degree program, provided that applicants can substantiate as a rule 90 ECTS credits of completed coursework in mathematics and physics courses.

19.2 Sufficient proficiency in English is required for the Master of Science in Integrated Climate System Sciences in order to reasonably understand course instruction and specialist literature. English proficiency may be demonstrated with any of the following:

- a) A BSc or MSc degree from an English-language degree program
- b) A valid IELTS test (as a rule not more than two years old upon commencement of studies) with an average score of 6.0 or better and at least 5.5 in the categories comprehension, reading, writing, and speaking
- c) A valid Internet-based TOEFL test (as a rule not more than two years old upon commencement of studies) with a score of at least 78 points and at least 18 points in the categories reading, comprehension, speaking, and writing
- d) A higher education entrance qualification for English-language higher education institutions

- e) At least a six-month stay in a English-speaking country, which as a rule should be within a period of no more than two years prior to commencement of studies
- f) Academic transcripts of equivalent quality

#### **20. Master of Science in Geography**

The following special conditions for admission shall apply to the Master of Science in Geography:

A bachelor's degree in geography from Universität Hamburg or a comparable degree program.

#### **21. Master of Science in Intelligent Adaptive Systems**

The following special conditions for admission shall apply to the Master of Science in Intelligent Adaptive Systems:

21.1 A bachelor's degree in one of the following subjects:

- a) Informatics
- b) Information systems
- c) Software systems development
- d) Human-computer interaction
- e) Computing in science

from the Faculty of Mathematics, Informatics and Natural Sciences at Universität Hamburg, a degree from another bachelor's degree program at Universität Hamburg, or a comparable degree from another higher education institution, provided that at least 60 ECTS credits of coursework has been completed in informatics and is comparable to the curriculum of a bachelor's degree program in informatics from the Faculty of Mathematics, Informatics and Natural Sciences at Universität Hamburg.

The selection committee shall determine the comparability of any degree program.

21.2 English language proficiency must be substantiated by:

- a) CEFR / TELC B2
- b) IELTS 6.5
- c) TOEFL (IBT 90, PBT 575, CBT 230)
- d) Cambridge CAE or CPE

or equivalent proof.

The selection committee shall determine the comparability of any proof proffered.

#### **22. Master of Science in Cosmetic Science**

The following special conditions for admission shall apply to the Master of Science in Cosmetic Science:

22.1 A bachelor's degree in teacher training in vocational education for the subject of cosmetic science from Universität Hamburg or a comparable degree program for the subject from another higher education institution

or

A bachelor's degree in chemistry, biochemistry, food chemistry, pharmacy, or a comparable degree program.

22.2 In special cases, admission may be possible in contravention of the requirements set forth in 22.1 (where appropriate, subject to specific conditions), provided that an applicant has a natural-science oriented bachelor's degree or comparable degree and at least one year of practical experience or 60 ECTS credits in cosmetic science and/or chemistry (e.g., pertinent internships, professional experience, or work produced).

The selection committee for cosmetic science shall render decisions related to 22.1 and 22.2.

### **23. Master of Science in IT Management and Consulting**

The following special conditions for admission shall apply to the Master of Science in IT Management and Consulting:

23.1 A bachelor's degree in one of the following subjects:

- a) Informatics
- b) Information systems
- c) Software systems development
- d) Human-computer interaction
- e) Computing in science

from the Faculty of Mathematics, Informatics and Natural Sciences at Universität Hamburg or a comparable degree from another higher education institution, provided that at least 60 ECTS credits of coursework has been completed in informatics.

23.2 An applicant's affirmation that he/she has sufficient knowledge of English to follow classes in English, read specialist literature, and take attendant oral and written examinations in English, as circumstances require.

### **24. Master of Science in Food Chemistry**

The following special conditions for admission shall apply to the Master of Science in Food Chemistry:

24.1 A bachelor's degree in food chemistry from Universität Hamburg or a comparable degree program.

24.2 In special cases, admission may be possible in contravention of the requirements set forth in subsection 1 above (where appropriate, subject to specific conditions), provided that an applicant has a bachelor's degree and can substantiate supplemental practical experience related to food chemistry (e.g., pertinent internships, professional experience, or work produced). The selection committee for the Master of Science in Food Chemistry shall render a decision in such a case.

24.3 Applicants must have adequate English-language skills. Adequate language proficiency may be demonstrated as follows:

- a) CEFR / TELC B2 (five years of English instruction at a state, state-accredited, or state-licensed school in Germany shall be considered equivalent)
- b) IELTS 5.0
- c) TOEFL (IBT 80, PBT 500, CBT 170)
- d) Cambridge FCE, CAE, or CPE
- e) Degree from an English-language bachelor's degree program
- f) A higher education entrance eligibility received in a program taught in English

#### **25. Master of Science in Nanosciences**

The following special conditions for admission shall apply to the Master of Science in Nanosciences:

A bachelor's degree in nanosciences from Universität Hamburg or a comparable degree program at another higher education institution

or

A bachelor's degree in physics from Universität Hamburg or a comparable degree program at another higher education institution in which the basic principles of chemistry and advanced knowledge of physical chemistry and/or nanochemistry have been covered

or

A bachelor's degree in chemistry from Universität Hamburg or a comparable degree program from another university in which the fundamentals of physics and advanced knowledge of nanostructure physics or solid state physics have been covered.

The selection committee for the Master of Science in Nanosciences shall render any determination decisions.

#### **26. Master of Science in Industrial Mathematics**

The following special conditions for admission shall apply to the English-language Master of Science in Industrial Mathematics:

26.1 A BSc degree in one of the following degree programs: mathematics (with technology, physics, or informatics as a supplementary subject) from Universität Hamburg, industrial mathematics from Hamburg University of Technology, or a comparable degree program at another higher education institution

or

A BSc degree in engineering (with mathematics as an area of concentration) from Hamburg University of Technology or a comparable degree program at another higher education

or

A BSc degree from another mathematics or technology bachelor's degree program, provided that applicants can substantiate at least 90 ECTS credits of completed coursework in courses that are comparable to the curriculum of the bachelor's degree program in industrial mathematics, mathematics, or engineering with an area of concentration in mathematics.

26.2 Sufficient proficiency in English is required for the Master of Science in Industrial Mathematics in order to reasonably understand course instruction and specialist literature. English proficiency may be demonstrated with any of the following:

- a) A degree from an English-language degree program
- b) TOEFL: 450 points on the written test, 130 points on the computer-based test, or 78 points on the Internet-based test
- c) IELTS test with a score of at least 4.5
- d) A higher education entrance qualification for English-language higher education institutions
- e) A six-month stay in an English-speaking country
- f) Academic transcripts of equivalent quality

With respect to academic transcripts of equivalent quality, in particular proof of a German higher education entrance eligibility evincing at least five years of English instruction at school is recommended.

## **Section 2**

### **Compensation for disadvantages**

Upon the submission of an application, appropriate compensation for disadvantages shall be granted, provided that an applicant can credibly demonstrate that he or she has been placed at a disadvantage compared to other applicants as he or she is unable to substantiate special conditions of admission in the designated manner or within the designated period of time on account of a disability. The representative for staff and students with disabilities or chronic diseases must be consulted pursuant to Section 88 subsection 3 HmbHG.

## **Section 3**

### **Extended submission deadlines**

In the event of outstanding undergraduate examinations, admission to a master's degree program may be applied for in accordance with the provisions set forth in Section 39 subsection 2 HmbHG, if, based on the course of studies to-date and in particular a student's examination performance to-date, it can be expected that a student will receive his or her degree by the end of the first semester of the master's degree program. Admission to the program may be permitted on the condition that

the degree has been awarded by the end of the registration period for the second semester of the master's degree program.

**Section 4**  
**Effective Date**

The Revised Bylaws shall become effective on the day following official publication by Universität Hamburg.

Hamburg, 24 May 2017  
**Universität Hamburg**