

Regulations for assessing the aptitude for the consecutive Master's program Chemistry

(Aptitude Assessment Regulations Chemistry)

as of March 8, 2022
(translated version)

Based on § 13 para. 4 and § 17 para. 10 of the Act on the Autonomy of Institutions of Higher Education in the Free State of Saxony (*Sächsisches Hochschulfreiheitsgesetz - SächsHSFG*) in the version of the announcement of January 15, 2013 (SächsGVBl. p. 3), last amended by Article 2 para 27 of the Act of April 5, 2019 (SächsGVBl. p. 245), Technische Universität Dresden issues the following Aptitude Assessment Regulations as statutes:

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§ 1

Scope of application

These regulations determine how the fulfillment of the special admission requirements are to be assessed (aptitude assessment) for the consecutive Master's degree program Chemistry at Technische Universität Dresden, based on the provisions of the applicable Act on the Autonomy of Institutions of Higher Education in the Free State of Saxony.

§ 2

Admission requirements

(1) Pursuant to § 3 of the study regulations for the consecutive Master's degree program in Chemistry, every applicant who has the required aptitude (qualification) for the Master's program in Chemistry is admitted to the program.

(2) Qualified and therefore entitled to admission within the meaning of para. 1 is anyone who:

1. can provide evidence of a first qualifying university degree recognized in Germany or a qualification from an officially recognized vocational academy in chemistry or a comparable specialist field,
2. demonstrates proficient command of the English language at the level B2 of the Common European Framework of Reference for Languages.
3. In addition, specialist knowledge and skills in the subject of chemistry as well as knowledge of elementary scientific correlations are required. It comprises the area of inorganic chemistry (fundamentals of chemistry, major and minor group elements, inorganic solid state, molecular and complex chemistry), the area of physical chemistry (kinetic gas theory, fundamentals of thermodynamics and phase equilibria, phase boundaries/surfaces, electrochemistry, kinetics, quantum mechanical theory of chemical bonding and spectroscopy, quantum chemical computational methods, and photochemistry), the area of organic chemistry (fundamentals and classes of substances, reaction classes and mechanisms, and applications of organic chemistry), and the area of analytical chemistry (general knowledge of analytical chemistry, instrumental analysis, and molecular structure determination). Furthermore, it includes the area of technical chemistry (chemical reaction engineering and chemical process technologies), biochemistry (descriptive and functional biochemistry) and macromolecular chemistry (fundamentals of macromolecular chemistry). In addition, the area of mathematics requires basic mathematical training in the areas of complex numbers, differential and integral calculus for functions of one and more real variables, linear algebra, and ordinary differential equations, while the area of physics requires basic physical training in mechanics, thermodynamics, electricity and magnetism, as well as waves and quanta. Proof of this particular suitability is provided in accordance with § 5 of these regulations.

§ 3

Admissions Committee

(1) The Dean of the Faculty of Chemistry and Food Chemistry shall appoint an Admissions Committee for the respective application period on the recommendation of the Academic Affairs Committee. As a rule, this committee shall consist of at least two university lecturers and one research associate of the Faculty of Chemistry and Food Chemistry.

(2) The Admissions Committee shall decide on whether the admission requirements pursuant to § 2 have been fulfilled and decide on appeals against decisions made as part of this procedure.

In addition, the Admissions Committee is responsible for the development and publication of the application form in accordance with § 4 para. 2 no. 1.

§ 4

Application and deadlines

(1) The application form for assessing the special aptitude according to these regulations of the Master's Degree Program in Chemistry is part of the required documents for enrollment and must be submitted in due time and in the correct form.

1. Applicants with a university degree obtained in Germany (entrance qualification for a Master's degree) must apply to the following address:

Technische Universität Dresden
Admissions Office
01062 Dresden
Germany

2. Applicants with a university degree obtained outside Germany (entrance qualification for a Master's degree) must apply via uni-assist e.V.

3. Applicants with citizenship outside the EU who have obtained their university degree (entrance qualification for a Master's degree) at a non-German university must apply for the winter semester by May 31 for the summer semester by November 30. All other German and international applicants must apply for the winter semester by July 15 and for the summer semester by January 15 of the respective year.

When registering for the aptitude assessment, the following documents must be submitted:

1. Application form
2. Curriculum vitae
3. Officially certified copy of a first degree qualifying for a profession (incl. Transcript of Records and Diploma Supplement) or an overview issued by the responsible examination office with all study achievements and examined assessments completed so far.
4. Proof of proficiency in English at the B2 level of the Common European Framework of Reference for Languages. Proof shall be deemed to have been furnished if
 - a) sufficient English training can be proven as part of the acquired university entrance qualification (for example, basic or advanced course in English or comparable levels) or
 - b) the previous degree program is/was entirely in English or
 - c) the Test of English as a Foreign Language (TOEFL internet-based) has been passed with a total score of at least 75 points and at least 18 points in each sub-aspect or
 - d) the IELTS test has been passed with at least level 6.0 in all sub-aspects or
 - e) the UNICert test has been passed with at least Level II.
5. Proof of degree program-specific vocational training, voluntary internships, or similar activities related to the planned degree program, if any.

(3) Applications that are not received in full, in due form or on time shall be excluded from any further proceedings.

(4) If, at the time of application, proof of the first university degree qualifying the applicant for a profession (degree certificate) in accordance with para. 2. no. 2 is not yet available, the applicant will also be included in the aptitude assessment procedure in accordance with these regulations. The prerequisite is that 80% of the credit points attainable for the university degree have already

been acquired based on completed module examinations or the graduation thesis and, if applicable, the colloquium by means of certification from the awarding university. As proof of this, the applicant must submit a corresponding certificate from their university in the original or as an officially certified copy. The necessity of submitting all other evidence mentioned in para. 2 and 3 alongside the application remain unaffected by this.

§ 5

Aptitude assessment procedure

(1) Based on the documents submitted, the Admissions Committee assesses whether the applicant is suitable for the Master's degree program in Chemistry as a result of their proven previous training. The commission members decide together on the points to be awarded in each case.

(2) The Admissions Committee assigns points for the respective criteria. Aptitude is confirmed if a minimum score of 80 points is achieved. The individual criteria are evaluated as follows:

1. In the subject area of Inorganic Chemistry (modules Chemistry of Main Group Elements, Chemistry of d-block Elements and Coordination Chemistry, Concepts of Inorganic Chemistry, Preparative Inorganic Chemistry), Organic Chemistry (modules Fundamentals of Organic Chemistry, Reaction Classes and Mechanisms of Organic Chemistry, Modern Methods of Organic Chemistry - Stereochemistry and Organometallics, Preparative Application of Modern Synthesis Methods in Organic Chemistry) and Physical Chemistry (Fundamentals of Physical Chemistry: Thermodynamics, Fundamentals of Physical Chemistry: Electrochemistry and Kinetics, Fundamentals of Theoretical Chemistry, Practical Fundamentals of Physical and Theoretical Chemistry, Special Physical Chemistry, Advanced Theoretical Chemistry), a minimum of 25 credit points per subject area must be earned to reach the maximum score of 20 points per subject area. If less than 25 credit points (LP) have been earned, points will be awarded as follows:
19 points=22-24 LP; 17 points=20-21 LP; 15 points=18-19 LP; 13 points=16-17 LP; 10 points=13-15 LP.
2. If in the subject area of Analytical Chemistry (modules General and Analytical Chemistry, Instrumental Analysis, Practice of Instrumental Analysis) 15 credit points are proven, 10 points are awarded. If less than 15 credit points have been earned, points will be awarded as follows:
9 points=13-14 LP; 8 points=11-12 LP; 7 points=9-10 LP; 6 points=7-8 LP.
3. In the subject area of Biochemistry, Macromolecular Chemistry and Technical Chemistry (modules Orientation Module for Chemistry, Fundamentals of Biochemistry, Macromolecular Chemistry, Fundamentals of Technical Chemistry) a total of at least 10 credit points must be proven. If proven, 5 points are awarded. If less than 10 credit points have been earned, points will be awarded as follows:
4 points=8-9 LP; 3 points=6-7 LP; 2 points=5 LP.
4. If in the subject areas of Mathematics and Physics (modules Fundamentals of Mathematics for Chemistry and Food Chemistry, Physics for Chemists and Food Chemists - Mechanics and Thermodynamics, Physics for Chemists and Food Chemists - Quantum Mechanics and Electricity Theory) a total of 15 credit points are proven, 5 points are awarded. If less than 15 credit points have been earned, points will be awarded as follows:
4 points=13-14 LP; 3 points=11-12 LP; 2 points=9-10 LP; 1 point=7-8 LP.
5. Grade of the university degree (max. 20 pts.): 1.0 to 2.0 (20); 2.1-2.3 (15); 2.4-2.7 (12); 2.8-3.0 (9); 3.1-3.3 (6); 3.4-3.7 (3); > 3.7 (0).
6. Practical training in a chemistry-related profession/apprenticeship (10 pts.):
 - a) Chemical Technical Assistant (CTA)
 - b) Chemical Lab Technician
 - c) Paint Lab Technician

- d) Pharmaceutical Technician
 - e) Food Technologist
- The equivalence of other professional qualifications close to the subject is at the discretion of the Admissions Committee.
7. A proven external internship of at least six months that is not part of a degree program (10 points).

§ 6

Notification of aptitude

(1) If the applicant's special aptitude is recognized, they will receive a written notification from the Admissions Committee immediately after the end of the procedure. The notification will be issued as of the date of the final meeting of the Admissions Committee.

(2) If the applicant's special aptitude could not be confirmed, the Admissions Committee will issue a written decision on this, which must be accompanied by instructions on how to appeal.

§ 7

Entry into force, expiry, and publication

These Aptitude Assessment Regulations shall enter into force on the day following their publication in the Official Announcements of Technische Universität Dresden. The Regulations on the Aptitude Assessment for the Consecutive Master's Degree Program in Chemistry of April 13, 2019 (Official Announcements of TU Dresden No. 06/2019 of April 22, 2019, p. 14) shall cease to apply.

Issued based on the resolution of the Faculty Board of the Faculty of Chemistry and Food Chemistry as of January 26, 2022, and the approval of the University Executive Board as of March 1, 2022.

Dresden, March 8, 2022

The Rector
of Technische Universität Dresden

Prof. Dr. Ursula M. Staudinger