

FOR INFORMATIVE USE ONLY.
Only the German version has legal validity.
Only the officially published version is legally binding

**Statute on the aptitude assessment for the Bachelor's programs
Management and Technology (TUM-BWL)
and Management and Technology
at the Technical University of Munich**

dated May 15, 2019

as amended by the First Amendment Statute of May 3, 2022

According to Article 13 subsection 1 sentence 2 in connection with Article 44 subsection 4 sentence 7 of the Bavarian university regulation (Bayerisches Hochschulgesetz), as well as § 34 subsection 2 of the qualification regulation (Qualifikationsverordnung) (BayRS 2210- 1-1-3 K/WK), the Technical University of Munich releases the following statute:

§ 1

Purpose of the Statute

- (1) ¹Admission of the Bachelor's programs Management and Technology (TUM- BWL) and Management and Technology at the Technical University of Munich (hereinafter referred to as TUM-BWL degree programs) in the first or a higher subject semester requires a special set of qualifications. ²To join in a higher semester, proof of competence corresponding to the basic modules mentioned in § 38 (2) of the Examination and Academic Regulations for the Bachelor's Program in Management & Technology at the Technical University of Munich is required. ³For admission to the second semester, at least one basic module from the mentioned ones in Sentence 2 must be recognized. ⁴For admission to the third semester or higher is required proof of at least three modules, corresponding to the modules Mathematics in Natural and Economic Science I, Management Science, Economics I and Statistics for Business Administration. ⁵The Bachelor's program Management and Technology (TUM-BWL) is offered both in the German Track and in the English Track. ⁶The Bachelor's program Management and Technology is offered in English. ⁷The aptitude assessment procedure for the Bachelor's program in Management and Technology (TUM-BWL) can be completed in German and English for the German Track and in English for the English Track. ⁸The aptitude assessment procedure for the Bachelor's program Management and Technology can be completed in English. ⁹The Bachelor's degree programs offer a unique program profile, which is elaborated upon in attachment 1. ¹⁰Therefore, in addition to the requirements specified in the examination and study regulation (Fachprüfungs- und Studienordnung, FPSO) the following provisions will be considered during the admission process.
- (2) ¹The purpose of the official process is to determine whether, in addition to the qualification proven with the acquisition of the higher education entrance qualification (HZB), the aptitude for the special qualitative requirements of the Bachelor's degree programs TUM-BWL is met. ²In addition to holding the university entrance qualifications, the following admission requirements are required:

Program-specific competencies:

1. You have skills in the fields of mathematics and natural sciences
You have Mathematical and logical skills, and the ability to apply these skills in the field of the interface between Engineering/natural Science and economics
2. In combination, an ability to clearly and precisely argue in the German or in English language.
3. Ability to understand and process economic issues.

³In order to acquire scientific and mathematical learning contents in engineering and the natural sciences, students in the qualified interdisciplinary TUM-BWL programs must possess sound knowledge in the field of mathematics and the natural sciences. ⁴This is particularly important because TUM-BWL students will attend undergraduate courses along with students from these related disciplines. ⁵Logical and analytical skills, as well as the ability to formulate clear and precise arguments in the languages mentioned in sentence 2 no. 2 are necessary competencies, which facilitate communication with experts in the interdisciplinary fields of economics and engineering/natural sciences.

§ 2

Admission process

- (1) The admission process will be carried out on a semi-annual basis during the summer semester for the subsequent winter semester, as well as during the winter semester for the subsequent summer semester, the latter of which is only available for applicants to higher semesters.
- (2) Applications for admission for the subsequent winter semester can be submitted to the Technical University of Munich in the online application procedure until July 15. Applications for the following summer semester can be submitted until January 15 (exclusion periods).
- (3) ¹Applications for the Bachelor's program Management and Technology (TUM-BWL) can be submitted either in the German or English language according to § 1 subsection 1 sentence 2 and 4. ²Applications for the Bachelor's program Management and Technology can be submitted in the English language according to § 1 subsection 1 sentence 3 and 5.
- (4) Please include the following attachments in your application:
 1. Resume in accordance with the prescribed format,
 2. Proof of university entrance qualifications,
 3. A Letter of motivation totaling a maximum of two pages, in which applicants elaborate on their choice for the program, as well as on their ability to understand and develop situations from an economic context. Applicants should also be able to explain which skills, talents and interests would qualify them for the program, for example through extracurricular activities; in the case of an application for both degree programs, a justification must be included for each program,
 4. Documents required in accordance with § 7 subsection 3 Statutes of Technical University of Munich on enrolment, re-enrolment, leave of absence and exmatriculation (ImmatS) as amended,

5. In the case of an application for a higher semester, a transcript of records with modules from previous studies, as well as the curriculum on which these studies are based must be provided (e.g. module handbook, module descriptions).
6. Proof that the applicant has written the motivation letter alone, without any external help and that any external sources used, are clearly highlighted. Should we identify any indications that the motivation letter has not been written by the applicant alone, admission may be denied.

§ 3 Aptitude Assessment Committee

- (1) ¹The admission process for the TUM-BWL programs is carried out by the committee of aptitude assessment processes (Committee) and the selection committee or committees, unless otherwise stated in these regulations. ²The Committee is responsible for the preparation, organization of the process, and ensuring a structured and standardized aptitude assessment process as part of these regulations. ³The selection committee or committees are responsible for carrying out the second stage of the process pursuant to § 6. ⁴The formal admission exam according to § 4 as well as the allocation of points in the first stage according to § 5 section 1. Nr. 1 and 2. and section 2 are carried out by the TUM Center for Study and Teaching – application and enrollment.
- (2) ¹The Committee consists of five members. ²The members of the committee are appointed by the Dean in consultation with the Vice Dean of Academic and Student Affairs from among the authorized examiners of the TUM School of Management involved in the degree program. ³At least three members of the committee must be an university professor according to Art. 2 (3) sentence 1 of the Bayerisches Hochschulgesetz (BayHSchG) [Bavarian Higher Education Act]. ⁴The Student Council has the right to select a representative to sit on the Committee in an advisory capacity. ⁵A deputy is appointed to each member of the Committee. ⁶The Committee elects a chairperson and a deputy chairperson from among its members. ⁷The Section § 30 of the General Regulations of the TUM in the current version applies to the conduct of business. ⁸The term of office of the members is one year. ⁹Extensions of the term of office and reappointments are possible. ¹⁰Urgent decisions which cannot be postponed may be taken by the Chairperson instead of the Commission; he or she shall immediately inform the Commission thereof. ¹¹The TUM Center for Study and Teaching- Application and Enrollment and the Office of Student Affairs will support the committee in particular with the awarding of points according to § 5 (1) 3. (+ if necessary 4).
- (3) ¹An aptitude assessment committee consists of two members from the groups of members of the TUM School of Management who are authorized to take examinations in the degree program in accordance with Art. 62 (1) sentence 1 BayHSchG in conjunction with the Hochschulprüfverordnung. ²The members shall be appointed by the committee. ³At least one member must be a university teacher according to the Bayerisches Hochschulgesetz (BayHSchG) [Bavarian Higher Education Act]. ⁴The term of office of the members is one year, § 3 (2) sentence 9 shall apply accordingly. ⁵The activity as a member of the committee can be exercised in addition to the activity as a member of the selection committee. ⁶The second stage according to § 6 can be carried out by one or more selection committees. ⁷In particular, the Committee can delegate to the Office of Student Affairs the composition of the selection committee from the members appointed by the Committee and the assignment of applicants. ⁸The Office of Student Affairs may assist the Selection Committee or Selection Committees in the implementation of the second stage.

§ 4

Admission requirements

¹Admission guidelines require submission of all documents listed in § 2 subsection 4 by the stated deadline in due form and in their entirety to the Technical University of Munich. ²If this is not the case, admission to the aptitude assessment procedure will not be granted. ³In the case of an application to a higher semester where it is determined that the required basic modules according to § 1 (1) sentence 2 to 4 are not available, the candidate will not be admitted to the aptitude assessment process.

§ 5

Admission process: First stage

- (1) During the first stage of the admission process, applicants will be assessed on the basis of the following criteria:
1. Grade point average (GPA) of the university entrance qualification and
 2. Subject-specific grades;

The weighting of the subject specific grades includes the subjects

- Mathematics (weighted double)
- The best science-related subject (weighted double)
- In the case of an application in accordance with § 1 subsection 1 sentence 1 and 2: German or English language (weighted single)
- in the case of an application according to § 1 subsection 1 sentences 3 and 5 English language (weighted single)

The grades listed in the HZB which were acquired in the last four semi-annual grade certificates, up to and including the grade certificates acquired upon graduation will be counted in the evaluation. The grades for the relevant subjects will be summarized according to their weight and divided by the total number of weighted grades. Research papers or other graded performances will not be considered.

Should more than one science-related subject be listed in the final grade certificate, the applicant may choose which subject shall be considered for their evaluation. In the case that the grade certificates were not issued on a semi-annual basis, only subject-specific grades issued with the university entrance qualification will be evaluated. Should the grade certificate not include all relevant subjects listed under point 2, the weighted grade point average will only consider the other relevant grades available; for the missing subject(s), the applicant will be invited to stage two of the admission process to demonstrate possession of the relevant knowledge according to § 5 subsection 2 sentence 3 and 4.

3. In deviation from point 1 and 2, all graduates of advanced professional trainings provided by a chamber of commerce (Meisterprüfung) will be evaluated based on their grade point average achieved upon completing professional training, as well as on their grade specific grade point average comprising the subjects of mathematics (weighted double), German or English (weighted normally) and a science-related

subject (weighted double). In a similar way, graduates of vocational schools or professional academies will be evaluated based on their grade point average achieved upon graduation or, should no grade point average be indicated, based on the weighted average of individual subject grades (excluding optional subjects), as well as on the subject specific grade point average for the subjects mathematics (weighted double), German or English (weighted normally) and a science-related subject (weighted double). Should the grade certificate not include all relevant subjects specified in § 1, the weighted grade point average will only reflect the other relevant grades available. For the missing subject(s), the applicant must prove he or she possesses the relevant knowledge by participating in the second stage of the admissions procedure.

- (2) For the assessment procedure the following applies:
1. ¹The average grade in the HZB is converted into points ("HZB points") on a scale from 0 to 100, 0 being the worst and 100 the best possible evaluation. ²The scale is constructed such as that a barely passed graduation will be awarded 40 points (see conversion formula in attn. 2). ³Applicants who can prove that there were reasons beyond their own control, which negatively influenced the outcome of their university entrance qualification may participate in the admission upon presenting a school assessment confirming these disadvantages.
 2. ¹The result of the assessment of the subject-specific grades according to subsection 1 point 2 will be converted into points on a 100- point scale (see conversion formula in attn. 2). ²If this number of points is a decimal, the resulting value will be rounded up to the next larger number.
 3. ¹The total score for the first stage of the assessment process stage is comprised of the sum of the HZB points (see point 1.) multiplied by 0.65 and the grade point average under point 2 multiplied by 0.35. ²If this number of points is a decimal, the resulting value will be rounded up to the next larger number.
- (3) ¹If 88 points and more have been achieved in the first stage, the subject-specific aptitude for the study programs TUM-BWL is determined. ²All subject-specific grades, however have to be listed on the final grade certificate that has been received upon graduation; even if the number of points required according to sentence 1 are achieved, the applicants must demonstrate during the second stage of the admission process that they possess the necessary skillset relevant for the program.
- (4) ¹The remaining candidates continue to the second stage of the aptitude assessment process. ²In this second stage they are invited for interview. ³Interview appointments will be announced at least one week in advance.

§ 6

Admission Process: Second stage

- (1) ¹Within the second stage of the admission process, the applicant's grade point average, as well as the result of the interview will be equally weighted and evaluated.
- (2) ¹The selection interview will be held in a private environment and is offered in the German and English language as specified in § 1 subsection 1 sentences 2 and 4 and in the English language as specified in § 1 subsection 1 sentences 3 and 5. ²The interview will

be held as a group conversation conducted by at least two members of the committee, one of whom is a University professor according to Art. 2 (3) sentence 1 of the of the Bavarian university regulation (BayHSchPG). ³The selection interview is usually conducted as a video conference. ⁴Should the video or sound transmission be disrupted, the interview may resume after the disruption has been fixed, or a follow-up appointment can be scheduled. ⁵In the event of a repeated disruption, the aptitude interview can be scheduled as a face-to-face appointment, notwithstanding sentence 3. ⁶Sentences 4 and 5 do not apply if it can be proved that the applicant is responsible for the disruption. ⁷In this case, the aptitude interview will be evaluated. ⁸At the request of the applicant, the aptitude interview will be scheduled as a face-to-face appointment. ⁹With the consent of the applicant, a student representative may join the conversation. ¹⁰Interviews will be held for approximately ten minutes per applicant. ¹¹The interview helps determine whether the applicant is capable in reaching the goals of the study program independently and on a scientific basis. ¹²Questions will not relate to knowledge offered through the TUM-BWL degree programs. ¹³The interview may include questions relating to the documents submitted under § 2 subsection 4. ¹⁴The appointment is to be attended at the date provided. ¹⁵The content of the conversation covers the following topics, which are weighted in the assessment as indicated in the brackets:

1. Mathematical knowledge

The applicant is able to formulate conclusions, analyze problems verbally and in writing (particularly within the interdisciplinary fields of economics and engineering or the natural sciences), perform relevant calculations, apply mathematical laws and concepts and produce viable results within an appropriate time horizon (1/5).

2. Natural Sciences knowledge

The applicant is able to explain the most important concepts in the field of natural sciences, can apply them to current problems (especially at the interface between management and natural sciences), compare alternatives and develop possible solutions (1/5).

3. The ability to combine and apply methods from the interdisciplinary field between economics and engineering or the natural sciences to current issues:

The applicant is able to elaborate on current developments in the field of economics and engineering or the natural sciences. The applicant is further able to formulate precise arguments utilizing relevant terms and argumentative concepts in the German or English language (3/5).

¹⁶On the basis of the weighting defined in sentence 11, every committee member assesses interviews on a standardized evaluation sheet according to the following scale:

Grade	Points
Excellent	91-100
Good	75-90
Satisfactory	60-74
Sufficient	40-59
Poor	20-39
Not sufficient	0-19

¹⁷ The overall evaluation of the interview is calculated as an arithmetic average of the individual evaluations of committee members which are rounded up to the next larger number, in the case that the resulting numbers are decimal.

- (3) ¹ The total score for the second stage of the assessment process is the sum of the HZB points (see § 5 (2) 1.) multiplied by 0.5 and the points from the interview multiplied by 0.5 (see (2)). ²If this score is a decimal, it will be rounded up in the candidate's favor.
- (4) ¹ If the total score according to (4) is 70 or more, the candidate will be deemed suitable on the basis of the second stage of the aptitude assessment process. ²Such candidates will receive an admission notification (§ 7).
- (5) Candidates with a total score of 69 or fewer points will be deemed unsuitable for the program.

§ 7 Notifications

¹The result of the aptitude assessment procedure will be disclosed through a written notification. ²In case of an application for both degree programs, a decision is issued for each degree program. ³If there is no leeway in the assessment of the individual criteria and in the determination of the overall results of the first and second stage, a decision by the commission is not necessary. ⁴Rejection notifications shall include an explanation for the cause of rejection, as well as information about legal remedies.

§ 8 Documentation

¹The process of the aptitude assessment procedure must be documented; in particular, the assessment of the selection interview by the commission members as well as the result of the evaluation. ²A transcript of the selection interview shall be prepared, in which the day, duration and venue of the evaluation, the names of the committee members involved, the names of the applicants as well as the essential topics of the interview shall be presented in key points.

§ 9 Resubmission

Anyone who fails to demonstrate aptitude for the degree programs can repeat the aptitude assessment process again.

§ 10 Entry into Force*)

¹This Statute has been put into effect as of 1. April 2019. ²It applies the first time to the aptitude assessment procedures for the winter semester of 2019/2020. ³At the same time, the statute dated 4 May 2017 is consequently ineffective.

*) This provision concerns the entry into force of the Articles of Association in the original version of 15 May 2019. The date of entry into force of the subsequent amendments shall be determined by the respective amending Articles of Association.

Attachment 1

Profile of the Bachelor Studies Technology and Management Oriented Business Administration and Management and Technology at the Technical University of Munich

The Bachelor programs Technology and Management-Oriented Business Administration or Management and Technology deal with the fundamentals of business administration and its interfaces with various engineering and natural science fields and have a fundamentally quantitative approach. The diverse interdependencies between the individual organizational areas as well as the progressive dissolution of traditional departmental boundaries are changing the nature of the qualifications required and demand qualified interdisciplinary thinking and action from its actors. Particularly at the interface between the economic and the engineering or natural science divisions of a company, communication and know-how barriers repeatedly arise in practice, which result from a lack of knowledge of the respective other discipline and a lack of understanding for the respective other subject culture.

These Bachelor programs provide future graduates with the best prerequisites for mastering these new challenges at the interface between business administration and engineering/natural sciences. The interlocking of business education with an engineering or natural science subject enables students to understand better the differing worlds of thought in both scientific fields and to apply successfully this knowledge to later professional practice.

These Bachelors programs are fundamentally interdisciplinary. Although the focus is on business education, the bridge to technology is built both in the actual business modules and in the engineering or natural science area through the integration of a major focus. Due to this interdisciplinary orientation, the degree programs require qualified interdisciplinary competence in the sense of specific preliminary skills to be combined from methodologically fundamentally different subject cultures.

These Bachelors programs are therefore aimed at school leavers with a university entrance qualification as well as those with vocational qualifications who think logically, have a high affinity for mathematical and quantitative approaches, communicate complex chains of reasoning in a clear and comprehensible manner and show an interest in engineering or natural science issues. The simultaneous development of these skills is crucial in order to be able to implement the business side of the study program on a quantitative and qualitative level on the one hand, and at the same time to muster the enthusiasm and motivation to deal with an engineering or natural science subject.

The subject of engineering and natural science will be attended by the students, as well as the students of the respective undergraduate program, so that interest and skills must be pronounced in order to be able to keep up successfully.

Attachment 2

Conversion formula

The conversion of different grading scales into points on a scale from Zero to 100 is done according to the regulations 1 to 3. 100 points correspond to the best possible evaluation and 40 points to a performance just rated as passed in the respective initial grading system.

1. German grading system

With 1 as best and 6 as worst grade

$$\text{Points} = 120 - 20 * \text{Grade.}$$

The marks 1, 2..., 5, and 6 consequently correspond to and 100, 80,..., 20 and 0 points. Grade 4 corresponds to 40 points. Since German grades in university entrance qualification are given up to one decimal place, no rounding to whole numbers is necessary when applying the formula of No. 1.

2. German point system (e.g. college level)

With 15 as best and 0 as worst score

$$\text{Points} = 10 + 6 * \text{Point value.}$$

3. Any numeric grade system

With grade N, where N_{opt} is the best grade and grade N_{best} is just enough to pass.

$$\text{Points} = 100 - 60 * (N_{\text{opt}} - N) / (N_{\text{opt}} - N_{\text{best}}).$$

If the resulting number of points is a decimal, it is rounded up to the next whole number in the candidate's favor.

E.g.: In the Bulgarian grading system applies: $N_{\text{opt}} = 6$, $N_{\text{best}} = 3$ and 1 is the worst possible grade. The formula given simplifies to: $\text{Points} = 100 - 20 * (6 - N)$.