Examination and Academic Regulations
for the Master’s Program
at the Technische Universität München (Campus Heilbronn)

dated 15. November 2021
as amended in the second amendment from 8th February 2022

In accordance with Art. 13 (1) sentence 2 in conjunction with Art. 58 (1) sentence 1, Art. 61 (2) sentence 1 and Art. 43 (5) [for continuing education Master’s programs 43 (6)] of the Bayerisches Hochschulgesetz (BayHSchG) [Bavarian Higher Education Act] the Technische Universität München issues the following Examination and Academic Regulations (Fachprüfungs- und Studienordnung, FPSO):

Introductory note on linguistic usage: In accordance with Art. 3 (2) of the German Constitution, women and men have equal rights. Any terms relating to persons and functions mentioned in the following regulations are equally valid for women and men.

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§ 34

Applicability, Academic Titles and related degrees

(1) These Examination and Academic Regulations for the Master’s program in Management at the Campus Heilbronn of the Technische Universität München (FPSO) complement the General Academic and Examination Regulations for Bachelor’s and Master’s programs at the Technische Universität München (APSO) as amended. The APSO shall have precedence.

(2) Upon successful completion of the Master’s examination the degree „Master of Science“ („M.Sc.“) is awarded. The academic title may also be used with the name of the university „(TUM)“.

(3) The master degree „management“, „industrial engineering“ and „economics for natural sciences“ of the Technische Universität München are related degrees. Where a student transfers from another university to the Technische Universität München, the examination board in charge will decide on the basis of the examination/general academic regulations of that other university if the programs are related.

§ 35

Commencement of Studies, Standard Duration of Studies, ECTS

(1) The Master’s program in Management at the Technische Universität München commences, as a rule, in the winter semester.

(2) The number of classes in required, elective subjects needed to obtain the Master’s degree is 90 credits (60 weekly hours per semester) spread over three semesters. Additionally, 30 credits (maximum six months) have to be achieved for the completion of the Master’s thesis pursuant to § 46. (Optional: The number of examinations in the required, required elective (optional: elective) subjects to be completed in the Management (Campus Heilbronn of the Technische Universität München) Master’s program according to Appendix 1 (II) is a minimum of 120 credits. The standard duration of study for the Master’s program will be a total of four semesters.

§ 36

Eligibility Requirements

(1) Eligibility for the master’s program in Management at the Campus Heilbronn of the Technische Universität München is demonstrated by

1. a qualified Bachelor’s of Science (B.Sc.) degree obtained after a program of at least six semesters from a domestic or foreign institution of higher education or at least an equivalent degree in engineering or natural sciences, as well as bachelor degrees the subject area of architecture or comparable programs.

2. an adequate knowledge of the English language; students whose native language or language of instruction is not English must demonstrate proficiency through an acknowledged language test such as “Test of English as a Foreign Language“ (TOEFL) (minimum of 88 points), “International English Language Testing System“ (IELTS) (minimum of 6.5 points), or “Cambridge Main Suite of English Examinations“; alternatively adequate language skills may be proven through a good grade in English (corresponding to at least 10 out of 15 points) awarded by a domestic higher education entrance qualification. If, in the undergraduate program, 12 credits were obtained for examinations administered in English language examination modules, or a thesis was written in English (minimum of 12 Credits), adequate proficiency in English is deemed proven. Additionally a GMAT-Score of at least 600 also proofs adequate proficiency in English.
3. Proof of professional knowledge in the form of a "Graduate Management Admission Test" (GMAT) with at least 640 points mandatory for applicants who have completed their first degree in the following countries: China, Bangladesh, India, Egypt, Pakistan; for other applicants with a first degree not completed in a signatory country of the Convention on the Recognition of Qualifications concerning Higher Education in the European Region of April 11, 1997 (hereinafter: Lisbon Convention), submission of the test is recommended according to sentence 1.

4. Passing of the Aptitude Test pursuant to Appendix 2.

(2) A qualified university degree within the meaning of para. 1 no. 1 exists if there are no significant differences with regard to the bachelor’s degree programs mentioned in para. 1 no. 1 of the TUM or comparable degrees acquired competencies (learning outcomes) exist and these correspond to the subject-specific requirements of the Master’s degree program.

(3) The assessment according to subsection 2 will be done based on the module catalogue of the respective Bachelor’s program.

§ 37
Modular Structure, Module Examination, Courses Fields of Study, Language of instruction

(1) General provisions concerning modules and courses are set forth in §§ 6 und 8 APSO. For any changes to the stipulated module provision § 12 (8) of the APSO shall apply.

(2) The curriculum listing the required and elective courses is included in Appendix 1 (III).

(3) The language of instruction in the Master’s program in Management at Campus Heilbronn is generally English. In case the student did not provide proof of German speaking skills at the time of application, the admission entails a requirement to successfully complete a course that teaches integrative German skills latest by the end of the second semester. The respective offers will be announced from the local examination board. Other language courses outside of TUM will also be recognized.

§ 37 a
Project Study

(1) The project study entails a project work, which requires an active participation in a practical or research project related to the content of the degree. It entails 12 credits and 360 working hours. The project study will be finalized with a written report and a presentation. It is supposed to be conducted from at least two people or abroad. It is supposed to be completed by the end of the third semester. Through this module it shall be proven that tasks can be solved as a team. The contribution to be assessed as an examination performance must be clearly recognizable and assessable individually. This also applies to the individual contribution to the group result. For the assessment, § 17 APSO applies.

(2) The Project Study has to be supervised by a professor of the TUM School of Management. Furthermore academic employees can also be appointed as examiners if the respectively applicable requirements of the “Hochschulprüfungsverordnung” are met.
§ 38
Examination Deadlines, Progress Monitoring, Failure to Meet Deadlines

(1) Examination deadlines, progress monitoring, and failure to meet deadlines are governed by § 10 APSO.

(2) At least one of the basic module examinations listed in Appendix 1 (II) must be successfully completed by the end of the second semester. In the event of failure to meet deadlines § 10 (5) of the APSO shall apply.

§ 39
Examination Board

Pursuant to § 29 of the APSO the board responsible for all decisions concerning examination matters shall be the Master’s Examination Board of the TUM School of Management, Technische Universität München.

§ 40
Recognition of Periods of Study, Coursework, and Examination Results

The recognition of periods of study, coursework and examination results is governed by the provision of § 16 of the APSO.

§ 41
Continuous Assessment Procedure

(1) In addition to written examinations (Klausuren) and oral examinations, types of assessment pursuant to §§ 12 und 13 APSO may include exercises, reports, projects, presentations, learning portfolios and/or research papers. The concrete components of the respective module examination and the competencies to be tested, are listed in the module description. Depending on the selection of the topic, the examination may be conducted as an individual or group examination; Section 18 (2) sentences 2 and 3 APSO shall apply accordingly.

a) A Klausur is a supervised written examination. In these written examinations, students are expected to demonstrate, within a limited amount of time and using predefined methods and resources, their ability to identify problems, find solution strategies and, if required, implement them. The duration of Klausuren is provided for in § 12 (7) of the APSO.

b) Exercises (tests where applicable) are administered to assess a student’s ability to complete assigned tasks (for example, solving mathematical problems, writing computer programs, designing models) using theoretical knowledge to solve application-oriented problems. Exercises are designed to assess a student’s factual and detailed knowledge and its application. Practical exercises may be administered in writing, orally, or electronically. Possible modes are assignments, exercise sheets, programming exercises, tests and exercises related to an internship. Details of each practical exercise and the related competencies to be examined are set out in the module descriptions.

c) A report is a written record and summary of a learning process for the purpose of presenting the acquired knowledge in a structured way and analyzing the results in the context of a module. Students are expected to demonstrate that they have understood all essential aspects and are able to present them in writing. Reports may include excursion reports, internship reports, work reports, etc. The written report may be complemented by a presentation for the purpose of assessing the student’s communication competency in presenting scholarly work to an audience.
d) Project work is designed to reach, in several phases (initiation, problem definition, role assignment, idea generation, criteria development, decision, implementation, presentation, written evaluation), the defined objective of a project assignment within a given period of time and using suitable instruments. In addition, project work may include a presentation in order to assess a student’s communication competency in presenting scholarly work to an audience. Project work can also be done through designed drafts, drawings, plan representations, models, objects, simulation and documentation.

e) A research paper is a written assignment in which students work independently on solving complex scholarly or scholarly/application-oriented problems, using the scientific methods of the related discipline. Students are expected to demonstrate that they are able to solve problems corresponding to the learning results of the module in question in compliance with the guidelines for scholarly work – from analysis and conception to implementation. Research papers, differing in their requirement standards, may take the form of a conceptual framework/theory paper [Thesenpapier], abstract, term paper, seminar paper, etc. The research paper may be complemented by a presentation and/or a colloquium for the purpose of assessing the student’s communication competency in presenting scholarly work to an audience.

f) A presentation is a systematic and structured oral performance supported by suitable audio-visual equipment (such as beamer, slides, posters, videos) for the purpose of demonstrating and summarizing specific issues or results and paring complex problems down to their essential core. For the presentation, the student is expected to demonstrate that he or she is capable of preparing a certain topic within a given time frame in such a way as to present or report it in a clear and comprehensible manner to an audience. In addition, the student is expected to demonstrate that he or she is able to respond competently to any questions, suggestions or discussions brought by the audience and relating to his or her subject area. The presentation may be complemented by a brief written report.

g) An oral examination is a timed, graded discussion on relevant topics and specific questions to be answered. In oral examinations students are expected to demonstrate that they have reached the qualification objectives laid out in the module descriptions, understood the central concepts of the subject matters covered by the exam, and are able to apply them to specific problems. The oral examination will be held either as an individual or group examination. The duration of the examination is provided for in § 13 (2) of the APSO.

h) A learning portfolio is a collection of written materials compiled by the student according to predefined criteria that exhibits the student’s progress and achievements in defined content areas at a given time. Students are required to explain according to which criteria they have chosen the materials and their relevance for their learning progress and the achievement of the qualification objectives. With the learning portfolio, students are expected to demonstrate that they have taken active responsibility for their learning process. Depending on the module description, types of independent study assessment in a learning portfolio may include, in particular, application-oriented assignments, web pages, weblogs, bibliographies, analyses, conceptual framework/theory papers, as well as the graphic representation of facts or problems. On the basis of the learning portfolio a summary technical discussion can take place for verbal reflection.

(2) The module examinations will, as a rule, be taken concurrently with the program. Type and duration of module examinations are provided for in Appendix 1 (II). In the event of divergence from those provisions, § 12 (8) of the APSO must be complied with. The assessment of the module examination is governed by § 17 of the APSO. The weights of the individual examinations are determined in appendix 1 (II) according to the credits.
(3) Where Appendix 1 (II) provides that a module examination is either in written or oral form, the examiner will inform the students in appropriate form, at the commencement of classes at the latest, of the type of examination to be held.

§ 42
Registration for and Admission to the Master’s Examination

(1) Students who are enrolled in the Master's program in Management (Campus Heilbronn of the Technische Universität München) are deemed admitted to the module examinations of the Master's examination.

(2) ¹Registration requirements for required and elective module examinations are stipulated in § 15 (1) APSO. ²The registration requirements for repeat examinations for failed required and required elective modules are stipulated in § 15 (2) APSO.

(3) ¹Admission requirements for the module “Advanced International Experience” is the successful completion of a stay abroad which is relevant to the context of the study. ²More details can be found in Appendix 1.

§ 43
Scope of the Master’s examination

(1) The Master's examination consists of:

1. the module examinations in the corresponding modules pursuant to subsection (2)
2. the Master’s thesis pursuant to § 46.

(2) ¹The module examinations are listed in Appendix 1 (II). ²60 Credits in required modules and a minimum of 30 credits in elective modules in management must be earned. ³The selection of modules must be in compliance with § 8 (2) of the APSO.

§ 44
Repeat Examinations, Failed Examinations

(1) The repetition of examinations is governed by § 24 of the APSO.

(2) Failure of examinations is governed by § 23 of the APSO.

§ 45
Coursework

In the Master’s program in Management at the Campus Heilbronn of the Technische Universität München no modules are completed through coursework.
§ 45 a
Multiple-Choice Test

The undertaking of multiple-choice tests is governed by § 12 of the APSO.

§ 46
Master's Thesis

(1) ¹As part of the Master's examination, each student must write a Master’s thesis pursuant to § 18 of the APSO.

(2) ¹The completion of the Master’s Thesis module should usually be the last examination performance. ²Students may be admitted to the Master’s Thesis module prematurely upon application if the goal of the thesis as defined in § 18 (2) APSO can be achieved in consideration of the previous course of study can be achieved.

(3) ¹The period of time between topic assignment and submission of the completed Master’s thesis must not exceed six months. ²The Master’s thesis is considered presented and not passed if the student fails to submit it on time without valid reasons pursuant § 10 (7) of the APSO. ³The Master’s thesis should be written in English language.

(4) ¹If the module of the master's thesis was not graded with at least „sufficient“ (4.0), it may be repeated once with a new topic. ²Students must renew the application of their master’s thesis topic within six weeks from receipt of the grade.

§ 47
Passing and Assessment of the Master's Examination

(1) The Master's Examination is deemed passed when all examinations required for the Master’s examination pursuant to § 43 (1) have been passed and a plus credits account of at least 120 credits has been achieved.

(2) ¹The grade of a module will be calculated according to § 17 of the APSO. ²The overall grade for the Master’s examination will be calculated as the weighted grade average of the modules according § 43 (2) sentence 2 and the Master’s thesis. ³The grade weights of the individual modules correspond to the credits assigned to each module. ⁴The overall assessment is expressed by the designation pursuant §17 of the APSO.

§ 48
Degree Certificate, Diploma, Diploma Supplement

¹If the Master’s examination was passed, a degree certificate, a diploma, and a diploma supplement including a transcript of records are to be issued in compliance with § 25 (1) and § 26 of the APSO. ²The date to be entered on the degree certificate is the day when all examination and course work requirements have been fulfilled.
§ 49*)
Entry into Force

(1) ¹ These Examination and Academic Regulations shall enter into force on first of January 2022. ² They shall apply to all students who commence their studies in the Management Master’s program of the Technische Universität München (Campus Heilbronn) as of the winter semester 2022/23.

(2) ¹ At the same time, the Examination and Study Regulations for the Master’s Program in Management at the Heilbronn Campus of the Technical University of Munich dated June 27, 2018, as amended by No. 75 of the Collective Amendment Statute on the Number of 8 examining committee members in the qualifying procedure for Master’s degree programs at the Technical University of Munich dated June 29, 2020, shall cease to be in force. ² Students who have already commenced their subject studies at the University of Technology complete their studies in accordance with the statutes pursuant to sentence 1

*) This date applies for the original version from 15. November 2021. The entry into force of changes done later depends on the respective date of the amending statute.
Appendix 1:

I. Scope of the Master’s Examination

<table>
<thead>
<tr>
<th>Components</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Study accompanying examinations for the achievement of the required credits in basics in management</td>
<td>42</td>
<td>1./2. Semester</td>
</tr>
<tr>
<td>2. Study accompanying examinations for the achievement of the required credits in basics in economics</td>
<td>6</td>
<td>1. Semester</td>
</tr>
<tr>
<td>3. Study accompanying examinations for the achievement of the required credits in basics in law</td>
<td>6</td>
<td>2. Semester</td>
</tr>
<tr>
<td>4. Study accompanying examinations for the achievement of the required credits in Entrepreneurial, Strategic, and International Management</td>
<td>6</td>
<td>1. Semester</td>
</tr>
<tr>
<td>5. Study accompanying examinations for the achievement of the required credits in electives in management</td>
<td>30</td>
<td>3. Semester</td>
</tr>
<tr>
<td>6. Master’s Thesis pursuant to § 46</td>
<td>30</td>
<td>4. Semester</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120</td>
</tr>
</tbody>
</table>
II. Exam modules

Master in Management (Required modules)

The following required modules have to be passed successfully.

<table>
<thead>
<tr>
<th>module number</th>
<th>module name</th>
<th>Required / required elective</th>
<th>Type / weekly hours</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of assessment</th>
<th>Duration of exams</th>
<th>Language of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIHN1139</td>
<td>Financial Accounting (MiM)</td>
<td>Required</td>
<td>2 V + 2 U</td>
<td>1. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>60</td>
<td>English</td>
</tr>
<tr>
<td>WIHN1137</td>
<td>Management Science (MiM)</td>
<td>Required</td>
<td>2 V + 2 U</td>
<td>1. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>60</td>
<td>English</td>
</tr>
<tr>
<td>WIHN0258</td>
<td>Empirical Research in Economics and Management</td>
<td>Required</td>
<td>2 V + 2 U</td>
<td>1. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>120</td>
<td>English</td>
</tr>
<tr>
<td>WIHN1138</td>
<td>Investment and Financial Management (MiM)</td>
<td>Required</td>
<td>2 V + 2 U</td>
<td>2. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>120</td>
<td>English</td>
</tr>
<tr>
<td>WIHN1129</td>
<td>Marketing &amp; Innovation Management (MiM)</td>
<td>Required</td>
<td>4 V</td>
<td>2. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>120</td>
<td>English</td>
</tr>
<tr>
<td>WIHN1131</td>
<td>Production and Logistics (MiM)</td>
<td>Required</td>
<td>4 V</td>
<td>2. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>120</td>
<td>English</td>
</tr>
<tr>
<td>WIHN1130</td>
<td>Cost Accounting (MiM)</td>
<td>Required</td>
<td>2 V + 2 U</td>
<td>2. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>60</td>
<td>English</td>
</tr>
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</table>

Basics in Economics

<table>
<thead>
<tr>
<th>module number</th>
<th>module name</th>
<th>Required / required elective</th>
<th>Type / weekly hours</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of assessment</th>
<th>Duration of exams</th>
<th>Language of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIHN1056_1</td>
<td>Principles of Economics</td>
<td>Required</td>
<td>2 V + 2 U</td>
<td>1. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>120</td>
<td>English</td>
</tr>
</tbody>
</table>

Basics in Law

<table>
<thead>
<tr>
<th>module number</th>
<th>module name</th>
<th>Required / required elective</th>
<th>Type / weekly hours</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of assessment</th>
<th>Duration of exams</th>
<th>Language of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIHN1122</td>
<td>Introduction to Business Law (MiM)</td>
<td>Required</td>
<td>2 V + 2 U</td>
<td>2. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>120</td>
<td>English</td>
</tr>
</tbody>
</table>

Entrepreneurial, Strategic and International Management

<table>
<thead>
<tr>
<th>module number</th>
<th>module name</th>
<th>Required / required elective</th>
<th>Type / weekly hours</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of assessment</th>
<th>Duration of exams</th>
<th>Language of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIHN1185</td>
<td>Entrepreneurial, Strategic, and International Management</td>
<td>Required</td>
<td>4 V</td>
<td>1. Sem.</td>
<td>5</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>120</td>
<td>English</td>
</tr>
</tbody>
</table>

Electives in management

As part of the economics electives, students complete credits in economics from a supplementary elective catalog totaling at least 30 credits. Of these, 12 credits can be earned as part of a project study in accordance with § 37 a.

Instead of examinations at TUM, subject-related examinations amounting to 30 credits can be taken at a foreign university as part of a stay abroad. For this purpose, the students compile an individual
semester study plan with a mentor appointed by the faculty. The corresponding courses are to be selected from the courses offered by the foreign university.

The supplementary elective catalog will be announced in an appropriate manner by the Faculty of Business and Economics on time before the start of lectures; enclosed is an exemplary catalog of electives.

<table>
<thead>
<tr>
<th>module-number</th>
<th>module name</th>
<th>required / elective</th>
<th>type weekly hours</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of assessment</th>
<th>duration of exam</th>
<th>language of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIHN9684</td>
<td>Project Studies (Master in Management)</td>
<td>Elective</td>
<td>3./4. Sem.</td>
<td>4</td>
<td>12 Credits</td>
<td>project</td>
<td>n.a.</td>
<td>English</td>
<td></td>
</tr>
<tr>
<td>WIHN0017</td>
<td>Advanced Seminar Innovation and Entrepreneurship: Digital Innovation</td>
<td>Elective</td>
<td>4 S</td>
<td>3./4. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>report</td>
<td>n.a.</td>
<td>English</td>
</tr>
<tr>
<td>WIHN0045</td>
<td>Advanced Seminar Innovation &amp; Entrepreneurship: Strategic Decision-Making in Entrepreneurship and Family Enterprises</td>
<td>Elective</td>
<td>4 S</td>
<td>3./4. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>report</td>
<td>n.a.</td>
<td>English</td>
</tr>
<tr>
<td>WIHN0011</td>
<td>Advanced Seminar Operations &amp; Supply Chain Management</td>
<td>Elective</td>
<td>4 V</td>
<td>3./4. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>report</td>
<td>n.a.</td>
<td>English</td>
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<tr>
<td>WIHN0012</td>
<td>Digital Finance</td>
<td>Elective</td>
<td>4 S</td>
<td>3./4. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>exam</td>
<td>90</td>
<td>English</td>
</tr>
<tr>
<td>WIHN1181</td>
<td>Advanced International Experience</td>
<td>Elective</td>
<td>4 V</td>
<td>3./4. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>Klausur</td>
<td>60 - 120</td>
<td>English</td>
</tr>
<tr>
<td>WIHN0014</td>
<td>Corporate Campus Challenge</td>
<td>Elective</td>
<td>4 S</td>
<td>3. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>report</td>
<td>n.a.</td>
<td>English</td>
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<tr>
<td>WIHN0013</td>
<td>Advanced Seminar Finance &amp; Accounting: Current Research Topics in Digital Finance</td>
<td>Elective</td>
<td>4 S</td>
<td>3./4. Sem.</td>
<td>4</td>
<td>6 Credits</td>
<td>report</td>
<td>n.a.</td>
<td>English</td>
</tr>
</tbody>
</table>

**Annotation:**

1) This module with the associated partial module examinations can extend over at least two semesters.

2) All forms of examination listed in § 41 are possible. Details, in particular the number, type, scope and grade calculation of these examinations, will be made known to the students in a suitable and binding manner no later than two weeks before the start of lectures.

3) The completion of the Advanced International Experience module requires the completion of a relevant stay abroad of usually 60 days. Suitable forms of the stay abroad are: Study abroad, internship abroad, other subject-relevant stays can be submitted to the examination board for decision.
The English version is provided merely as a convenience and is not intended to be a legally binding document! Only the officially promulgated German version is legally binding.

**Master’s Thesis**

<table>
<thead>
<tr>
<th>module number</th>
<th>Master’s Thesis (Master in Management)</th>
<th>Required/elective</th>
<th>Credits</th>
<th>Language of instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIHN9268</td>
<td>Master’s Thesis</td>
<td>Required</td>
<td>30 Credits</td>
<td>English</td>
</tr>
</tbody>
</table>

**Explanations:**
Sem. = Semester; SWS = Semesterwochenstunden (weekly hours); V = Vorlesung (Exam); Ü = Übung (exercise); K = Klausur (exam); S = Seminar. In case of an oral or written exam, the duration of the exam can be found in the column “duration of exam” (in minutes).
III. Study plan

1. Study plan

<table>
<thead>
<tr>
<th>Semester</th>
<th>Event</th>
<th>module type</th>
<th>credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Semester</td>
<td>Financial Accounting (MiM)</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Management Science (MiM)</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Empirical Research in Economics and Management</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Principles of Economics</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurial, Strategic, and International Management</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Credits totaling 1. semester:</strong></td>
<td></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td>2. Semester</td>
<td>Investment and Financial Management (MiM)</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Introduction to Business Law (MiM)</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Marketing &amp; Innovation Management (MiM)</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Production and Logistics (MiM)</td>
<td>required module</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Cost Accounting (MiM)</td>
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</tr>
<tr>
<td></td>
<td><strong>Credits totaling 2. semester:</strong></td>
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<tr>
<td>3. Semester</td>
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<tr>
<td></td>
<td><strong>Credits totaling 3. semester:</strong></td>
<td></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td>4. Semester</td>
<td>Master’s Thesis (Master in Management)</td>
<td>required module</td>
<td>30</td>
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<tr>
<td></td>
<td><strong>Credits totaling 4. semester:</strong></td>
<td></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits Master’s in Management (Campus Heilbronn of Technische Universität München):</strong></td>
<td></td>
<td><strong>120</strong></td>
</tr>
</tbody>
</table>
Appendix 2: Aptitude Assessment

Aptitude Assessment for the Master's Program in Management at the Technische Universität München

1. Purpose of the Assessment

Eligibility for the Master's program in management at the Campus Heilbronn of the Technische Universität München, in addition to the requirements pursuant to § 36 (1) no(s) and 2, requires proof of aptitude pursuant to § 36 (1) no. 4 in accordance with the following provisions. The special qualifications and skills of the candidates should correspond to the profession of engineering or natural sciences. Individual aptitude parameters are:

1.1 Subject knowledge (incl. success) from a first degree in the field of engineering or natural sciences in accordance with the engineering and natural science bachelor’s degree programs of the Technische Universität München.

1.2 Knowledge in the economic-technical context

1.3 Ability to do research work and/or basic research and methodological work;

1.4 English technical language proficiency

2. Aptitude Assessment Process

2.1 The aptitude test will be held annually. The Enrollment Statutes, in particular § 7, shall apply to the procedure for determining eligibility.

2.2 Applicatoins for the performance of to the aptitude test including the documents set out in 2.3 as well as in § 36 (1) No. 2 and 3 must be filed online by 31 May for the winter semester to the Technische Universität München (absolute deadline). Degree certificate and Diploma as proof of passing the bachelor’s degree must be filed with the TUM Center for Study and Teaching no later than five weeks after the beginning of the lectures. Otherwise, admission to the Master's program is not yet possible in accordance with § 36 of this statute.

2.3 The application must include:

2.3.1 Transcript of records with modules totaling 140 credits, issued by the respective examination board or the responsible office of student affairs and handed in as certified copy. A certified copy is not necessary if the modules were achieved at the Technische Universität München.

2.3.2 A curricular analysis derived from the transcript of records; this must be completed by the applicants as part of the online application process and attached as a printout to the application documents.

2.3.3 Curriculum vitae formatted as a table;

2.3.4 A written essay in English of at least 1500 and maximum of 2000 words; the essay has to be uploaded in TUMOnline as well as handed in as a printed version. The chairperson of the committee may provide one topic or a selection of several topics for this essay. The candidates must be informed of the topic(s) not later than 1 April.

2.3.5 A declaration that the essay was written independently and without outside help and that it was written in compliance with the guidelines for ensuring good scientific practice and for dealing with scientific misconduct at the Technische University of Munich, the thoughts taken from external sources are marked as such.

2.3.6 Optionally, for applicants who are not required to provide evidence of a GMAT score in accordance with § 36 (1) no. 3, evidence of a GMAT score
3. **Aptitude Assessment Committee**

3.1 The assessment procedure is carried out by the aptitude assessment committee and the selection committees. The aptitude assessment committee shall be responsible for preparing the procedure, organizing it and ensuring a structured and standardized procedure for determining suitability within the framework of these statutes; it shall be responsible insofar as no other responsibility is specified by these regulations or delegation. The implementation of the procedure pursuant to No. 5 subject to No. 3.2 sentence 11 shall be the responsibility of the selection commissions.

3.2 The aptitude assessment committee shall consist of five members. These are appointed by the Dean in consultation with the Associate Dean for Academic Affairs from among the members of the TUM School of Management who are entitled to take examinations and are involved in the degree program. At least three of the commission members must be university professors in the sense of the BayHSchPG. The student council has the right to nominate a student representative to serve in an advisory capacity on the commission. For each member of the commission, a deputy shall be appointed. The commission shall elect a chairperson and a deputy chairperson from among its members. The course of business shall be governed by § 30 of the Basic Regulations of the TUM as latest amended. The term of office of the members is one year. Extensions of the term of office and reappointments are possible. The chairperson may make urgent decisions in lieu of the committee on the suitability procedure; he or she must inform the committee of such decisions without delay. The Office of Student Affairs shall support the Commission on the Qualification Procedure and the Selection Committees; the Commission on the Qualification Procedure may delegate to the Office of Student Affairs the task of the formal admission examination according to No. 4 as well as the evaluation of points on the basis of previously defined criteria for which there is no leeway for evaluation, in particular the conversion of the grade, the determination of the total number of points achieved, the composition of the Selection Committees from the members appointed by the Commission as well as the assignment to the applicants.

3.3 The selection committees each consist of two members from the group of members of the TUM School of Management who are authorized to examine in the degree program according to Art. 62 (1) Sentence 1 BayHSchG in conjunction with the University Examination Ordinance. At least one member must be a university lecturer within the meaning of the BayHSchPG. The activity as a member of the commission for the aptitude test can be exercised in addition to the activity as a member of the selection committee. The members shall be appointed by the aptitude assessment committee for a period of one year; No. 3.2 sentence 9 shall apply accordingly. Different selection committees may be appointed for each criterion and stage.

4. **Admission to the Aptitude Assessment Process**

4.1 The execution of the aptitude assessment process requires that the documents mentioned in No. 2.2 are submitted in due form and time, in compliance with the rules of good scientific practice, and in their entirety. In order to determine whether the rules of good scientific practice have been observed, the essay will be checked with special plagiarism checking software. checked Applicants who have fulfilled the requirements will be tested according to no. 5.

4.2 Checked applicants who have fulfilled the requirements will be tested according to no.5. Otherwise, a notice of rejection will be issued, stating the reasons and stating the right to appeal. If the selection committee comes to the conclusion that the rules of good scientific practice have been significantly violated, the applicant shall be excluded from the current application procedure. Sentence 2 shall apply accordingly.
5. **The Aptitude Assessment Process**

5.1 First stage of the aptitude assessment process.

5.1.1 The aptitude assessment committee will assess, on the basis of the written application documents required under no. 2.3, whether or not an applicant is suitable for a program pursuant to no. 1 (first stage of the aptitude assessment process). For this purpose, the aptitude assessment committee evaluates and grades the candidate’s documentation on a scale ranging from 0 to 75, 0 being the worst and 75 being the best possible result. Negative results will not be given.

The following criteria will be applied to the evaluation:

a) **Academic qualification**

1°The curricular analysis of the existing specialized knowledge is not carried out by schematic comparison of the modules, but on the basis of competencies. 2°It is based on the elementary subject groups listed below, which are taken into account either for an engineering bachelor’s degree program or for a bachelor’s degree program in the natural sciences.

Subject groups Bachelor’s program in engineering

a) **Engineering Fundamentals:**

Mathematics, Technical mechanics, Machine Design, Materials Science, Machinery and Plant Engineering,

b) **Bachelor Electrical Engineering and Information Technology:**

Mathematics, computer science, digital technology, circuit technology, electricity and magnetism, physics, measurement system and sensor technology, signals, materials of electrical engineering, electromagnetic field theory, systems, electronic components, computer technology, electrical power engineering.

c) **Bachelor of Civil Engineering and Surveying:**

Mathematics, engineering mechanics, hydromechanics, construction process management, structural analysis, finite elements, hydrology, hydraulic engineering, urban water management, surveying.

d) **Bachelor architecture**

Design, construction, statics and strength of materials, history of construction, representation and design, structural design and materials, building climates and building technology, digital form finding, urban design, urban planning, urban studies, visual design, architecture and design theory, art history.

e) **Other engineering subject groups**

For engineering bachelor degrees other than those listed under a) to d), the subject catalog of the corresponding degree program at the Technical University of Munich is used as a basis.

Subject groups in natural sciences

a) **Bachelor Computer Science:**


b) **Bachelor mathematics:**

Analysis, Linear Algebra, Discrete Mathematics, Numeric, Probability Theory, Mathematical Modeling, Programming Language;
c) Bachelor Games Engineering:

d) Bachelor Bioinformatics:

e) Bachelor Biology:

f) Bachelor Physics:
Experimental physics, linear algebra, calculus, theoretical physics (mechanics/electrodynamics/quantum mechanics), and chemistry;

g) Bachelor Chemistry

h) Bachelor Nutritional Science:
Inorganic experimental chemistry, Inorganic chemistry, Cell biology, Experimental physics, Physical practical, Mathematics, Biology: Genetics, Human Physiology, Computer Science, Organic Chemistry, Principles of Human Nutrition, Food Science, Biochemistry, Physiology, Morphology, Microbiology, Nutritional Physiology of Macro- and Micronutrients, Food Microbiology, Food Science, Immunology, Experimental Nutrition Research, Nutritional Medicine, Human Sensory Science, Bio functionality of Food, Toxicology, Pharmacology and Clinical Studies, Regulation of Metabolism, Biostatistics;

i) Bachelor Earth sciences:
Mathematics, Experimental Physics, Chemistry, Biology, Data Processing in the Geosciences, General Mineralogy, Paleontology, Geological Maps and Profiles, Rocks, Applied Geophysics;
j) Bachelor Biotechnology:

k) Bachelor Scientific basics of sport:
Basic competencies in sports science (introduction to sports science work, basics of the theory of sports science, basics of mathematics and natural sciences), anatomical basics for sports and health science (functional anatomy of the human musculoskeletal system, anatomy of the internal organs), biological/physiological basics (biochemistry, physiology), anatomical basics for sports and health science, movement sciences (basics of movement science, basics of biomechanics), methodology (experimental design and descriptive statistics, Probability theory and inferential statistics, Experimental work), Biological/physiological competencies in sport (neuroanatomy/physiology, performance/work physiology, nutrition and fluid balance, doping prevention), Health science, Fundamentals of sports medicine, Introduction to traumatology, Training Science Competency, Psychological Competency (Fundamentals of Psych regulation, Psychology of Motivation and Emotion), Sports Education/Didactic Competency, Applied Anatomy, Biomechanical Competency, Basic Sports Diagnostic Competency, Sports Science Methodological Competency, Sports Technology;

l) Bachelor Medicine:
General medicine, anesthesiology, occupational medicine, social medicine, ophthalmology, surgery, dermatology, venereology, gynecology, obstetrics, otolaryngology, human genetics, hygiene, microbiology, virology, internal medicine, pediatrics, clinical chemistry, laboratory diagnostics, neurology, orthopedics, pathology, pharmacology, toxicology, psychiatry and psychotherapy, psychosomatic medicine and psychotherapy, legal medicine, urology.

³Where a candidate’s competencies are at least equivalent to those listed above he/she will be awarded a maximum of 50 points. ⁴In the case this value is not an integer, it shall be rounded up to the next larger number. ⁵Missing competencies will be deducted in accordance with the credits of the corresponding modules of the respective Bachelor’s program at the Technische Universität München. ⁶If a GMAT score is to be submitted in accordance with Section 36 (1) No. 3, it is assumed that, with regard to the competencies demonstrated in the initial degree, there are no significant differences with regard to the level compared to the reference degree programs mentioned in section 5.1.1 a) sentence 2 and that the curricular analysis is carried out in accordance with the above-mentioned criteria.

b) Final Grade
One point is awarded for each tenth of a grade that the average calculated over examination performances amounting to 140 credits is better than 2.5. ²The maximum number of points is 15. ³For foreign degrees, the grade converted using the Bavarian formula is used.
If a degree certificate with more than 140 credits is available at the time of application, the evaluation will be based on the best graded modules amounting to 140 credits. It is the responsibility of the applicants to list these as part of the application and to confirm in writing that the information provided is correct. If this is done, the average is calculated from the best graded module examinations amounting to 140 credits; if this information is missing, the overall average grade submitted by the applicant is used. The overall grade point average is calculated as the weighted grade point average of the modules. The grade weights of the individual modules correspond to the assigned credits.

| grade | 1   | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2   | 2.1 | 2.2 | 2.3 | 2.4 | ≥2.5 |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| points| 15  | 14  | 13  | 12  | 11  | 10  | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   | 0    |

**c) GMAT-Score**

The proof of a current GMAT-Score with at least 650 points will be awarded with 1 point. Other Scores will be awarded as follows:

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<th>GMAT</th>
<th>≤640</th>
<th>650</th>
<th>660</th>
<th>670</th>
<th>680</th>
<th>690</th>
<th>700</th>
<th>≥710</th>
</tr>
</thead>
<tbody>
<tr>
<td>points</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

5.1.2 The score for the first level is calculated from the sum of the individual scores, whereby is rounded up to whole numbers of points.

5.1.3 Applicants who achieved at least 62 points will receive confirmation that they have passed the aptitude assessment test.

5.1.4 Applicants who achieved less than 50 points will receive notification that they have not passed the aptitude assessment test.

5.2 **Zweite Stufe der Durchführung des Eignungsverfahrens:**

5.2.1 The remaining applicants will be evaluated according to their essay. In the second stage of the aptitude assessment process the applicant's qualification at undergraduate level, the grade of the ranking (or the overall grade) and the result of the essay will be evaluated, taking at least equal consideration of the qualification obtained at undergraduate level. The essay will be graded with points between 0 to 40 by two members of the aptitude assessment committee. The content of the essay will be graded according to the following criteria:

The applicants should be able to:

1. present skills of scientific-logical argumentation with basic and method-oriented text structure, as well as to write the essay in a scientific manner and with correct citation of sources,

2. frame the question in the context of economic-technical issues,

3. express themselves in English.

5.2.2 All three criteria will be graded individually by each member of the committee. The criteria will be weighted as follows:

1. Ability to present scientific logical argumentation with basic and methodological text structure as well as to write the essay in a scientific manner and with correct citation of sources: maximum 20 points,
The English version is provided merely as a convenience and is not intended to be a legally binding document! Only the officially promulgated German version is legally binding.

2. Framing of the question in the context of economic-technical issues: maximum 10 points.
3. Expression in English: 10 Punkte.

5.2.3 ¹The grading of the essay will be done by the aptitude assessment committee. ²The two members of the committee will each grade all three of the mentioned criteria independently from each other. ³The score per aptitude assessment committee member results from the sum of the weighted evaluations of the individual criteria. ⁴The total score is the arithmetic mean of the scores of the two committee members, rounded up to whole numbers of points. ⁵The maximum number of points is 40.

5.2.4 ¹The applicant’s points total in the second stage are calculated as the sum of all points obtained under 5.2.3 and the points under 5.1.1.a) (academic qualification) and 5.1.1. b) (final grade). ²Applicants with 80 or more points will be deemed suitable. ²Applicants with less than 80 points have not passed the aptitude assessment.

5.3 Assessment and notification of results

¹The result of the aptitude assessment will be determined based on the achieved points and will be disclosed through an official letter. ²A rejection notice must specify the reason for the rejection and provide information on legal remedies.

5.4 Admissions to the Master’s program in Management shall apply to all subsequent applications for this program.

6. Documentation

The aptitude assessment process must be documented; especially the names of the applicants, the names of the involved members of the committee of the first and second stage, the final result and the justification for the grading of the essay; the justification can be done in note form.

7. Repetition

Applicants who have failed the aptitude test for the Master’s program in management may register for one repetition of the Aptitude Assessment Test.