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## **Academic and Examination Regulations for the Master's Degree Program Architecture at the Technical University of Munich**

**dated 16 February 2023**

In accordance with Art. 9 Sentence 2 in conjunction with Art. 80(1) Sentence 1, Art. 84(2) Sentence 1 and Art. 90(1) Sentence 2 of the Bavarian Higher Education Innovation Act [Hochschulinnovationsgesetzes (BayHIG)] the Technical University of Munich issues the following Regulations:

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### **§ 34**

#### **Applicability, Academic Titles**

- (1) <sup>1</sup>The Academic and Examination Regulations for the Master's Degree Program Architecture (FPSO) complement the General Academic and Examination Regulations for bachelor's and master's programs at the Technical University of Munich (APSO) dated 18 March 2011 as amended. <sup>2</sup>The APSO has precedence.
- (2) <sup>1</sup>Upon successful completion of the master's examination, the degree "Master of Arts" ("M.A.") is awarded. <sup>2</sup>The academic title may also be used with the name of the university "(TUM)".

### **§ 35**

#### **Commencement of Study, Standard Duration of Study, ECTS**

- (1) The Master's Degree Program Architecture at the Technical University of Munich commences, as a rule, in the winter semester.
- (2) <sup>1</sup>The number of classes in required and elective subjects needed to obtain the master's degree is 90 credits (on average 44 weekly hours per semester) spread over three semesters. <sup>2</sup>Students will have a maximum of six months to complete their master's thesis in accordance with § 46. <sup>3</sup>The number of coursework units and examinations in required and elective subjects to be completed in the Master's Degree Program Architecture according to Appendix 1 is a minimum of 120 credits. <sup>4</sup>The standard duration of study for the master's program is a total of four semesters.

### **§ 36**

#### **Eligibility Requirements**

- (1) <sup>1</sup>Eligibility for the Master's Degree Program Architecture is demonstrated by:
  1. the following university degrees:
    - a) An eight-semester Bachelor's degree in Architecture from the Technical University of Munich, which includes at least one semester of study abroad, or
    - b) a qualified bachelor's 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 Architecture or a comparable degree program amounting to 180 credits.

<sup>2</sup>If, in the case of letter 1. b), the student has completed at least one semester of qualified studies at a foreign university in which at least 20 credits were earned in relevant modules, the remaining maximum of 60 credits must be proven in accordance with Appendix 1, Section "Elective Modules" of the Academic and Examination Regulations for the Master's Degree Program Architecture dated 9 May 2022, as amended; otherwise, the studies at a foreign university must be proven no later than when submitting the master's thesis. <sup>3</sup>Students who have a degree as defined in letter 1. b) with fewer than 240 credits must provide evidence of the missing credits no later than when submitting their master's thesis.
  2. Passing of the aptitude assessment according to Appendix 2.
- (2) A degree is considered to be qualified within the meaning of 1(1) if there are no significant differences with regard to the competencies (learning outcomes) acquired during the first professional qualifying degree program and the required modules of the Bachelor's Degree Program Architecture at the Technical University Munich.
- (3) <sup>1</sup>For determining a qualified degree in accordance with § 36(2), required modules of the TUM Bachelor's Degree Program Architecture will be considered. <sup>2</sup>If students do not meet all credit

requirements, the Selection Committee can, in accordance with Appendix 2 No. 3, require students to complete additional fundamentals exams in accordance with § 36(1) to verify their qualification as stipulated in Appendix 2 No. 5.1.3. <sup>3</sup>Candidates must be informed thereof after review of the documentation during the first stage of the aptitude assessment.

- (4) <sup>1</sup>As an exception to § 36(1)1, students enrolled in a bachelor's program specified in § 36(1)1 may be admitted to the master's program in justified cases. <sup>2</sup>An application to the master's program by students enrolled in a bachelor's program may only be submitted if it can be verified that, in the case of a seven-semester bachelor's program, examination credits amounting to at least 180 credits; and in the case of an eight-semester bachelor's program, examination credits amounting to at least 200 credits have been completed at the time of submission of the application. <sup>3</sup>Verification of the awarding of the bachelor's degree must be provided within one year of commencement of the master's program.

### **§ 37**

#### **Modular Structure, Module Examination, Courses, Areas of Specialization, Language of Instruction**

- (1) <sup>1</sup>General provisions concerning modules and courses are set out in §§ 6 and 8 of the APSO. <sup>2</sup>For any changes to the stipulated module provisions, § 12(8) of the APSO applies.
- (2) The curriculum listing the required and elective modules is included in Appendix 1.
- (3) <sup>1</sup>In the Master's Degree Program Architecture, students may put together their own personal curriculum in line with the specifications set out in Appendix 1. <sup>2</sup>Students have the option of choosing one of the following three areas of concentration:
1. Technology of Architecture
  2. Cultural Heritage
  3. City and Landscape.
- <sup>3</sup>Students have chosen an area of concentration if
1. the master's thesis according to § 46,
  2. the master's seminar 'Methodical Development of Research Issues',
  3. at least one project and
  4. elective modules amounting to a minimum of 27 credits

match the chosen area of concentration. <sup>4</sup>If the master's thesis, master's seminar and projects are part of the areas of concentration will be determined at the beginning of the semester or when commencing work on the thesis on the basis of the respective content, or in the case of projects in the module descriptions; the assignment of elective modules to the areas of concentration is based on Appendix 1. <sup>5</sup>When a student has successfully chosen an area of concentration, it will be indicated in the Transcript of Records. <sup>6</sup>Should the criteria in Sentence 3 not be met, no area of concentration can be recognized and no area of concentration will be indicated in the Transcript of Records. <sup>7</sup>When putting together a personal curriculum in accordance with Sentence 1, the student may consult a mentor for advice. <sup>8</sup>If students decide to follow the suggestions or guidelines of a mentor, a corresponding note is added to their transcript. <sup>9</sup>Any person of the TUM School of Engineering and Design's Department of Architecture who is authorized to conduct examinations in accordance with the act governing examiners at institutions of higher education [Hochschulprüferverordnung] may be appointed as a mentor.

- (4) <sup>1</sup>As a rule, the language of instruction in the Master's Degree Program Architecture is German. <sup>2</sup>Modules taught entirely or partly in English are identified in Appendix 1. <sup>3</sup>Where the language of instruction for a module is specified in the Appendix as either English or German, the examiner will announce, in a suitable manner no later than the first day of classes, which will be the official language of instruction.

### § 38

#### Examination Deadlines, Academic Progress Checks, Failure to Meet Deadlines

- (1) Examination deadlines, academic progress checks, and failure to meet deadlines are governed by § 10 of the APSO.
- (2) <sup>1</sup>At least one of the module examinations from the project elective modules listed in Appendix 1 must be successfully completed by the end of the second semester. <sup>2</sup>In the event of failure to comply with these deadlines § 10(5) of the APSO applies.

### § 39 Examination Board

In accordance with § 29 of the APSO, the board responsible for all decisions concerning examination matters is the Master's Examination Board Architecture at the TUM School of Engineering and Design.

### § 40

#### Recognition of Periods of Study, Coursework and Examination Results

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

### § 41

#### Continuous Assessment Procedure, Types of Assessment

- (1) <sup>1</sup>In addition to written and oral examinations, types of assessment in accordance with § 12 and § 13 of the APSO may include (but are not limited to) laboratory assignments, exercises (tests, where applicable), reports, project work, presentations, learning portfolios, research papers, or parcours examinations. <sup>2</sup>Details of each module examination and the competencies to be assessed in each examination are set out in the module descriptions. <sup>3</sup>Where the topic permits, the examination can be held either as an individual or group examination; § 18(2) Sentences 2 and 3 of the APSO apply accordingly.
- a) <sup>1</sup>A **written examination** is a supervised examination, in which 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. <sup>2</sup>The duration of written examinations is regulated in § 12(7) of the APSO.
- b) <sup>1</sup>Depending on the discipline, **laboratory assignments** may include experiments, measurements, field work, field exercises, etc., with the goal of students conducting such work, evaluating results, and gaining knowledge. <sup>2</sup>These may consist of, for example, process descriptions and the underlying theoretical principles including studying the relevant literature; preparation and practical implementation; calculations, if required, and documentation, evaluation, and interpretation of the results in the context of the knowledge to be gained. <sup>3</sup>Laboratory assignments may be complemented by presentations designed to demonstrate a student's communication competency in presenting scholarly work to an audience.

- c) **Practical credit requirements** involve students completing assigned tasks (for example, solving mathematical problems, writing computer programs, preparing models, preparing designs) using theoretical knowledge to solve application-oriented problems. <sup>2</sup>Exercises are designed to assess a student's factual and detailed knowledge and its application. <sup>3</sup>Practical exercises may be administered in writing, orally, or electronically. <sup>4</sup>They may be in the form of homework assignments, practice sheets, programming exercises, (e-)tests, design tasks, posters, tasks assigned within a university internship program, etc.
- d) **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. <sup>2</sup>Students are expected to demonstrate that they have understood all essential aspects and are able to present them in writing. <sup>3</sup>Reports may include excursion reports, internship reports, work reports, etc. <sup>4</sup>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.
- e) **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. <sup>2</sup>In addition, project work may include a presentation or a subject-specific discussion in order to assess a student's communication competency in presenting scholarly work to an audience. <sup>3</sup>It may also encompass design sketches, drawings, plans, models, objects, simulations or documentation.
- f) **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. <sup>2</sup>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. <sup>3</sup>Research papers, differing in their requirement standards, may take the form of a conceptual framework/theory paper, abstract, term paper, seminar paper, etc. <sup>4</sup>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.
- g) **A presentation** is a systematic and structured oral performance supported by suitable audio-visual equipment (such as projector, slides, posters, videos) for the purpose of demonstrating and summarizing specific issues or results and paring complex problems down to their essential core. <sup>2</sup>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. <sup>3</sup>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. <sup>4</sup>The presentation may be complemented by a brief written precis.
- h) **An oral examination** is a timed, graded discussion on relevant topics and specific questions to be answered. <sup>2</sup>In oral examinations students are expected to demonstrate that they have understood the central concepts of the subject matter covered by the exam and are able to apply them to specific problems. <sup>3</sup>The duration of the examination is regulated in § 13(2) of the APSO.
- i) **A learning portfolio** is a collection of completed work compiled by the student according to predefined criteria that exhibits the student's progress and achievements in defined content areas at a given time. <sup>2</sup>Students are required to explain why they chose the work they have and its relevance for their learning progress and the achievement of the defined learning outcomes. <sup>3</sup>With the learning portfolio, students are expected to demonstrate that they have taken active responsibility for their learning process. <sup>4</sup>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. <sup>5</sup>A subject-specific final oral discussion for the purpose of reflection and based on the content of the learning portfolio may also take place.

- j) <sup>1</sup>The **parcours examination** is made up of several components. <sup>2</sup>Unlike a module examination component, parcours exam components are administered in sequence and completed in a specific time frame and location. <sup>3</sup>Parcours components entail various types of examination, which together evaluate the competency profile of the module as a whole. <sup>4</sup>Possible types of examination in parcours components may include those listed in g) and h) in combination with a practical requirement. <sup>5</sup>The total duration of the parcours examination with all its components is indicated in the module catalog.
- (2) <sup>1</sup>As a rule, module examinations are taken concurrently with the program. <sup>2</sup>The type and duration of module examinations is stipulated in Appendix 1. <sup>3</sup>For any changes to the stipulated module provisions § 12(8) of the APSO applies. <sup>4</sup>The assessment of the module examination is governed by § 17 of the APSO. <sup>5</sup>The grade weights of module examination components correspond to the weighting factors assigned to them in Appendix 1.
- (3) Where Appendix 1 provides that a module examination is either in written or oral form, the examiner will inform the students officially and in appropriate form, no later than the first day of classes, of the type of examination to be held.
- (4) At the request of the students and with the consent of the examiners, examinations in English may be taken for modules in German.

## § 42

### Admission to and Registration for the Master's Examination

- (1) Students who are enrolled in the Master's Degree Program Architecture are deemed admitted to the module examinations of the master's examination.
- (2) <sup>1</sup>Registration requirements for required and elective module examinations are stipulated in § 15(1) of the APSO. <sup>2</sup>Registration requirements for repeat examinations are stipulated in § 15(2) of the APSO.

## § 43

### Scope of the Master's Examination

- (1) The master's examination consists of:
1. the module examinations in the corresponding modules according to § 43(2), and
  2. the Master's Thesis module according to § 46.
- (2) <sup>1</sup>The module examinations are listed in Appendix 1. <sup>2</sup>Students must complete 3 credits in the required modules, at least 45 credits in project elective module and at least 42 credits in elective modules. <sup>3</sup>The selection of modules must comply 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 (Pass/Fail Credit Requirements)**

Apart from examinations, the Master's Degree Program Architecture does not require any coursework.

**§ 45 a**  
**Multiple Choice Tests**

The conduct of multiple choice tests is governed by § 12 a of the APSO.

**§ 46**  
**Master's Thesis**

- (1) As part of the master's examination, each student must write a master's thesis pursuant to § 18 of the APSO.
- (2) <sup>1</sup>Completion of the Master's Thesis module, as a rule, is the final examination requirement. <sup>2</sup>Upon request students may be granted early approval to commence work on the master's thesis if the objective of the thesis in the sense of § 18(2) APSO can be fulfilled under consideration of the progression of studies to date.
- (3) <sup>1</sup>The period between topic assignment and submission of the completed thesis must not exceed six months. <sup>2</sup>The thesis is considered presented and not passed if the student fails to submit it on time without valid reasons as specified in § 10(7) of the APSO. <sup>3</sup>The thesis may be written in either the German or the English language.
- (4) <sup>1</sup>The completion of the master's thesis consists of an academic composition and a presentation on its content. <sup>2</sup>30 credits are awarded for the Master's Thesis module.
- (5) <sup>1</sup>If the Master's Thesis module was not graded as at least "sufficient" (4.0), it may be repeated once with a new topic. <sup>2</sup>Students must renew their application to prepare the Master's Thesis module within six weeks of 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 in accordance with § 43(1) have been passed and a plus credits account of at least 120 credits has been achieved.

- (2) <sup>1</sup>The module grade will be determined according to § 17 of the APSO. <sup>2</sup>The overall grade for the master's examination will be calculated as the weighted grade average of the modules according to § 43(2) and the Master's Thesis module. <sup>3</sup>The grade weights of the individual modules correspond to the credits assigned to each module. <sup>4</sup>The overall assessment is expressed by the designation according to § 17 of the APSO.

### **§ 48**

#### **Degree Certificate, Diploma, Diploma Supplement**

If 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.

### **§ 49**

#### **Entry into Force**

- (1) <sup>1</sup>These regulations will enter into force on 1 April 2023. <sup>2</sup>They apply to all students who commence their studies at the Technical University of Munich as of the winter semester 2023/24.
- (2) <sup>1</sup>At the same time, the regulations for the Master's Degree Program Architecture at the Technical University of Munich from 26 March 2018, recently amended by the Collective Amending Statute from 29 June 2020, cease to apply. <sup>2</sup>Students who commenced their studies at the Technical University of Munich prior to the winter semester 2023/24 are to complete their studies in accordance with the regulations named in § 49(2) Sentence 1. <sup>3</sup>By request, they may transfer to the new Academic and Examination regulations.



## Appendix 1: Examination Modules

Explanation: SWS = Semesterwochenstunden/weekly hours per semester;  
 V = Vorlesung/lecture; Ü = Übung/exercise module; SE = seminar; PT = Projekt/project; ID = interdisciplinary project; VI = Vorlesung mit integrierten Übungen/lecture with exercises; PR = Praktikum/internship; E = language of instruction English

As a rule, the language of instruction is German; English-language supervision is available, especially for exercises and project work. The modules taught in English only are labeled accordingly in the appendix. For written exams, the column Examination Duration indicates the examination duration in minutes.

### Master's Degree Program Architecture

**Required Modules:** The following modules need to be completed in the semesters stipulated:

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
AR30210	Methodical Development of Research Issues	SE	3	2	3	Research paper	-
AR30006	Master's Thesis	-	4	0.45	30	Research paper	-

### Project Elective Modules

One project each must be successfully completed in the first three semesters. A total of 45 credits must be earned from the module catalogs "Project" and "Project Continuation".

#### Project

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
ED120055	Project Architecture and Timber Construction	PT+SE	1/2/3	6+2	15	Project work	-
ED120052	Project MA – AND Studio	PT+SE	1/2/3	6+2	15	Project work	-
AR30233	Project Continuation - History of Architecture and Curatorial Practice	PT+SE	1/2/3	6+2	15	Project work	-
AR30228	Project - Architectural Informatics	PT+SE	1/2/3	6+2	15	Project work	-
AR30209	Project - Architectural Design	PT+SE	1/2/3	6+2	15	Project work	-
AR30231	Project - Architectural Design and Construction	PT+SE	1/2/3	6+2	15	Project work	-
AR30230	Project - Categories of Rebuilding	PT+SE	1/2/3	6+2	15	Project work	-
AR30236	Project - Building Technology and Climate Responsive Design	PT+SE	1/2/3	6+2	15	Project work	-
AR30373	Project - Green Technologies MA	PT+SE	1/2/3	6+2	15	Project work	-
AR30351	Project – Landscape Architecture and Public Space	PT+SE	1/2/3	6+2	15	Project work	-
AR30243	Project - Sustainable Urbanism	PT+SE	1/2/3	6+2	15	Project work	-
AR30244	Project - Spatial Development	PT+SE	1/2/3	6+2	15	Project work	-
AR30245	Project Urban Design	PT+SE	1/2/3	6+2	15	Project work	-
AR30246	Project Urban Design and Housing	PT+SE	1/2/3	6+2	15	Project work	-

#### Project Continuation (only in suitable cases and in consultation with the professor coordinating the module)

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
AR30248	Project Continuation - Architectural Informatics	PT+SE	2/3	6+2	15	Project work	-
AR30301	Project Continuation - Architectural Design	PT+SE	2/3	6+2	15	Project work	-
AR30254	Project Continuation - Architectural Design and Construction	PT+SE	2/3	6+2	15	Project work	-
AR30252	Project Continuation - Rebuilding Strategies	PT+SE	2/3	6+2	15	Project work	-
AR30265	Project Continuation - Building Technology and Climate Responsive Design	PT+SE	2/3	6+2	15	Project work	-
AR30375	Project Continuation - Green Technologies MA	PT+SE	2/3	6+2	15	Project work	-
AR30277	Project Continuation - Sustainable Urbanism	PT+SE	2/3	6+2	15	Project work	-
AR30279	Project Continuation - Spatial Development	PT+SE	2/3	6+2	15	Project work	-
AR30281	Project Continuation - Urban Design	PT+SE	2/3	6+2	15	Project work	-

AR30283	Project Continuation - Urban Design and Housing	PT+SE	2/3	6+2	15	Project work	-
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### Example Elective Module Catalog

As part of the Master's Degree Program Architecture, elective modules amounting to at least 42 credits must be completed. Essentially, all modules from the general elective module catalog "Architecture" as well as the following 3 subject-related elective module catalogs are available for selection or can be freely combined (please also note the respective module descriptions and the recommended prerequisites). In addition, a maximum of 9 credits can be taken from the elective module catalog "Related Fields".

If students wish to choose an area of concentration in accordance with § 37(3), an additional requirement is that the vast majority of elective modules (at least 27 of a total of 42 credits) must be chosen from one of the corresponding subject-related elective module catalogs. An updated version of the elective module catalogs will be provided by the Examination Board in the Study Office each semester.

### Elective Modules Catalog 'Architecture' (without subject-related classification)

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
AR30363	Algorithmic Design	SE	SS	4	6	Project work	-
ED130012	Advanced Topics in Sustainable Real Estate (E)	V	SS	2	3	Practical credit requirement	-
AR30137	Design Methods	SE	WS/SS	4	6	Research paper	-
AR30181	Architecture and Reference	SE	SS	4	6	Research paper	-
BGU65015	BIM.project	SE	WS/SS	4	6	Project work	-
AR30033	Fine Art	Ü	WS	4	6	Project work	-
AR30104	Gestalt 2.0	SE	WS/SS	2	6	Project work	-
AR30365	Interactive Visualization	SE	WS	4	6	Project work	-
AR30199	Interdisciplinary Project	SE		4	6	Project work	-
AR30095	Artistic Project I	Ü	WS	2	3	Project work	-
AR30096	Artistic Project II	Ü	WS	2	3	Project work	-
AR30364	Parametric Design	SE	SS	4	6	Project work	-
AR30366	Performance Based Design	SE	WS	4	6	Project work	-
AR30362	Rendertube	SE	SS	4	6	Project work	-
AR30128	Special Topics Architectural Design and Construction II (E)	SE	SS	4	6	Practical credit requirement	-
AR30286	Scenography	SE	WS/SS	4	6	Project work	-

### Elective Module Catalog 'Technology of Architecture' Integrated Building Technologies

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
AR30012	Occupational Health and Safety	Ü	WS/SS	4	6	Written exam	120
BGU65016	BIM.fundamentals (E)	SE	WS	4	6	Project work	-
AR30056	Building System Performance (E)	V	WS	4	6	Project work	-
AR72048	Green Technologies MA	SE	WS/SS	4	6	Research paper	-
ED120058	Advanced Timber Construction	SE	WS/SS	4	6	Project work	-
AR30294	Climate Responsive Building I	V	WS	2	3	Written exam	60
AR17041	Climate Responsive Building II (E)	V	SS	2	3	Written exam	60
AR17054	Conceptual Fire Prevention	V	WS	2	3	Oral	20
AR30107	Materials + Architecture	SE	WS/SS	2	3	Written exam	60
BGU62055	Sustainable Building Basic Module	V+Ü	SS	2+2	6	Research paper	-
AR30317	Lecture Series TUM.wood	V	WS	2	3	Written exam	90
AR30166	Special Topics of Timber Construction II	SE	WS/SS	4	6	Project work	-
AR30011	Structural Design	V+Ü	WS	2+2	6	Written exam	60
BV620003	Interaction between Sustainability and Building Culture (E)	SE	WS	4	6	Research paper	-

### Elective Module Catalog 'Cultural Heritage' *Cultural Heritage, History and Criticism*

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
AR30076	Architectural Analysis	SE	WS/SS	4	6	Research paper	-
AR30202	Museum of Architecture	SE	WS/SS	4	6	Research paper	-
AR30419	Building Archaeology	SE	WS/SS	4	6	Learning portfolio	-
AR30309	Conservation of Historical Buildings Today I	V	WS	2	3	Oral	20
AR30331	Conservation of Historical Buildings Today II	V	SS	2	3	Oral	20
AR30367	Document, Preserve, Rebuild I	SE	WS/SS	4	6	Project work	-
AR30342	Document, Preserve, Rebuild II	SE	SS	4	6	Project work	-
AR30022	History of Architectural Theory	V	WS	2	3	Written exam	60
AR17042	Historic Structures of the Industrial Age	V	SS	2	3	Written exam	60
AR17048	Repair of Historic Construction	V	SS	2	3	Oral	20
AR30075	Reading-based Course on Architectural Theory	SE	WS/SS	4	6	Research paper	-

### Elective Module Catalog 'City and Landscape' *Urban and Landscape Transformation*

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
AR30205	Urban Architecture	SE	WS	4	6	Research paper	-
AR30316	Building Register I	SE	WS/SS	2	3	Project work	-
AR30083	Building Register II	SE	WS/SS	4	6	Project work	-
AR72047	Green Typologies – MA	SE	WS/SS	4	6	Research paper	-
AR30213	Urban Development through Mobility	SE	WS/SS	2	3	Project work	-
BGU62046	Sustainable Architecture, Urban- and Landscape Planning	V+SE	WS	2+2	6	Research paper	-
AR30168	Building Law	V	WS	2	3	Oral	30
AR30002	Spatial Economy	V	WS	4	6	Written exam	120
AR30200	Sustainable Urbanism I	Ü	WS	2	3	Research paper	-
AR30201	Sustainable Urbanism II	SE	SS	2	3	Project work	-
AR72032	Theory and Criticism of Landscape Architecture	SE+V	WS/SS	2+2	6	Practical credit requirement	-

### Elective Module Catalog 'Related Fields'

A maximum of 9 credits can be obtained from the catalog. Students can choose freely from TUM's range of courses.

Module No.	Module Name	Type of Instruction	Semester	SWS	Credits	Type of Examination	Duration of Examination
BGU51030	Experience through Damage	V	SS	2	3	Project work	-
BV130001	Data and Information Management in Projects	V	WS	2	3	Project work	-
BV300022	Spatial Databases and Visualization	V+VI+VI	WS	1+3+2	6	Written exam	120
BV360009	Life-cycle Assessment	VI	WS	2	3	Written exam	60
BV000077	Portfolio and Asset Management	V	WS	2	3	Written exam	60
BV130021	Real Estate Markets and Investors	V	WS	2	3	Written exam	60
WZ4028	Fire Behavior of Wood and Wood-based Products	V+Ü	SS	2+2	5	Oral	20
MW2245	Think. Make. Start (E)	PR	WS/SS	4	6	Project work	-
W1100180	Business Plan - Advanced Course (Business Models, Sales and Finance)	SE	WS/SS	4	6	Project work (business plan)	-
BV550017	Sustainable Real Estate Development (E)	VI	SS	4	6	Written exam	90

**Credit Total:**

Semester	Credits required modules	Credits project elective modules	Credits elective modules	Credits Master's Thesis	Credits total
1	-	15	15	-	30
2	-	15	15	-	30
3	3	15	12	-	30
4	-		-	30	30

## **Appendix 2: Aptitude Assessment**

### **Aptitude Assessment for the Master's Degree Program Architecture at the Technical University of Munich**

#### **1. Purpose of the Process**

<sup>1</sup>Eligibility for the Master's Degree Program Architecture in addition to the requirements pursuant to § 36(1) No. 1, requires proof of aptitude pursuant to § 36(1) No. 2 in accordance with the following provisions. <sup>2</sup>The special qualifications and skills of the candidates should correspond to the field of Architecture. <sup>3</sup>Individual aptitude parameters are:

- 1.1 ability to do scholarly work and/or basic and methodologically sound research,
- 1.2 specialist knowledge from a bachelor's degree program in Architecture in line with the Bachelor's Degree Program Architecture at the Technical University of Munich,
- 1.3 oral and written skills in the subject-specific language that go beyond the level of standard recognized language certificates,
- 1.4 scientific interest in issues relating to Architecture and Structural Engineering.

#### **2. Aptitude Assessment Process**

2.1 <sup>1</sup>The aptitude assessment is held once every six months in the summer semester for the following winter semester and, in the case of applications for higher semesters only, in the winter semester for the following summer semester by the TUM School of Engineering and Design. <sup>2</sup>The TUM Enrollment, Student Fees Payment, Leave of Absence and Disenrollment Regulations (ImmatS) of 6 January 2023 as amended, in particular § 6, apply to the aptitude assessment process.

2.2 Applications for admission to the aptitude assessment process in accordance with § 6 of the ImmatS must be submitted to the Technical University of Munich together with the documents listed in 2.3 and in § 36(1)2 no later than 31 May or no later than 15 January for the summer semester (absolute deadlines) using the online application procedure.

2.3 The application must include:

2.3.1 a transcript of records with modules amounting to at least 180 credits for a six- or seven-semester bachelor's degree program or, for degree programs not subject to the "European Credit Transfer and Accumulation System" (ECTS), at least six semesters, and at least 200 credits for an eight-semester bachelor's degree program; the transcript of records must show how the individual subjects taken are weighted in terms of grading and workload; the transcript of records must be issued by the responsible examination authority or the responsible academic programs office,

2.3.2 curriculum vitae formatted as a table,

2.3.3 a written statement (max. 500 words) of the reasons for choosing the Master's Degree Program Architecture at the Technical University of Munich, in which the candidate explains the exceptional motivation that makes he/she particularly qualified for the Master's Degree Program Architecture at the Technical University of Munich; a candidate's exceptional motivation is to be demonstrated by providing details on program-related vocational training, internships, stays abroad, or program-related further education beyond the attendance and course requirements of the bachelor's program, if necessary by appropriate documentation,

2.3.4 a portfolio of previous work (no more than 15 pages, must not exceed the size of a DIN A4 format) in electronic form (PDF file, maximum 20 MB, upload in the TUM online application portal),

2.3.5 a declaration that the written statement and the portfolio is the applicant's own work and that the applicant has clearly identified any ideas taken from outside sources.

#### **3. Aptitude Assessment Commission, Selection Committees**

- 3.1 <sup>1</sup>The aptitude assessment is administered by the Aptitude Assessment Commission (Commission) and the Selection Committees. <sup>2</sup>The Commission is responsible for preparing the aptitude assessment process, organizing it and ensuring a structured and standardized process for determining aptitude within the framework of these Regulations; it bears responsibility, insofar as no other body is specified by these Regulations or through delegation of its authority to another body. <sup>3</sup>Selection Committees are to conduct the assessment process in accordance with No. 5 below, subject to No. 3.2 Sentence 11
- 3.2 <sup>1</sup>The Aptitude Assessment Commission consists of five members. <sup>2</sup>Members of the Commission 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 Engineering and Design, who are members of the degree program faculty. <sup>3</sup>At least three Commission members must be university educators within the meaning of the Bavarian Higher Education Innovation Act [Hochschulinnovationsgesetzes (BayHIG)]. <sup>4</sup>The departmental student council has the right to name a student representative to serve on the Commission in an advisory capacity. <sup>5</sup>A deputy is to be appointed for each member of the Commission. <sup>6</sup>The Commission elects a chairperson and a deputy chairperson from among its members. <sup>7</sup>Procedures are governed by § 31 of the TUM Charter as last amended. <sup>8</sup>The term in office of Commission members is 1 year. <sup>9</sup>Extensions of the term of office and reappointments are possible. <sup>10</sup>Urgent decisions that cannot be postponed can be made by the chairperson on behalf of the Commission; He/She must inform the Commission of such decisions without delay. <sup>11</sup>The School Office, Academic and Student Affairs team, supports the Commission and the Selection Committee; the Commission may delegate to the Office the task of assessing formal admissions requirements in accordance with No. 4, as well as the determination of points to be awarded based on defined criteria for which there is no freedom of discretion involved. This includes, in particular, the conversion of grades and the calculation of the overall points earned by the applicant. The Office may also be involved in choosing the members of the Selection Committee from among the commissioners and assigning them to applicants.
- 3.3 <sup>1</sup>Each Selection Committee consists of two members of the TUM School of Engineering and Design, who are authorized to conduct examinations in the degree program according to Art. 85(1) Sentence 1 of the Bavarian Higher Education Innovation Act [Hochschulinnovationsgesetzes (BayHIG)] in conjunction with the act governing examiners at institutions of higher education [Hochschulprüferverordnung]. <sup>2</sup>At least one member must be a university educator within the meaning of the Bavarian Higher Education Innovation Act [Hochschulinnovationsgesetzes (BayHIG)]. <sup>3</sup>It is permissible to serve concurrently on both the Aptitude Assessment Commission and the Selection Committee. <sup>4</sup>Members of the Committee are appointed by the Commission for a term of 1 year; No. 3.2 Sentence 9 applies accordingly. <sup>5</sup>Different Selection Committees may be assigned to individual criteria and stages of the assessment process.

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

- 4.1 Admission to the aptitude assessment process requires that all documentation specified in No. 2.2 has been submitted in a timely and complete fashion.
- 4.2 <sup>1</sup>Applicants who have fulfilled the requirements according to No. 4.1 will be assessed according to No. 5. <sup>2</sup>Applicants not suited for the program will receive a letter of rejection stating the grounds for rejection and informing them of legal remedies.

## 5. The Aptitude Assessment Process

### 5.1 First Stage

5.1.1 <sup>1</sup>It will be assessed, 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). <sup>2</sup>The candidate's application documents will be evaluated on a scale ranging from 0 to 60 points, 0 being the worst and 60 the best possible result.

<sup>3</sup>The following criteria will be applied to the evaluation:

a) Grade

<sup>1</sup>The applicant will be awarded one point for each tenth that the average calculated from examinations in the amount of 180 credits is better than 4.0. <sup>2</sup>The maximum number of points is 30. <sup>3</sup>Negative points will not be awarded. <sup>4</sup>Grades of international degrees will be converted by applying the Bavarian formula.

<sup>5</sup>If the candidate has submitted a degree certificate containing more than 180 credits with the application, the assessment will be made on the basis of the best graded modules in the amount of 180 credits. <sup>6</sup>The applicant needs to submit a list of the results together with the application and confirm its accuracy in writing. <sup>7</sup>If the candidate submits this list, the average is calculated from graded module examinations with the best grades amounting to 180 credits; if no list is submitted, the overall average of grades submitted by the candidate will be used to calculate the average. <sup>8</sup>The overall grade average is calculated as a weighted grade average. <sup>9</sup>The grade weights of the individual modules correspond to the credits assigned to each module.

b) Portfolio of previous work

The evaluation of the portfolio of previous work is based on the fundamental subject groups of the Bachelor's Degree Program Architecture at the Technical University of Munich and is assessed by the respective selection committee independently on a scale of 0 to 30 points. <sup>2</sup>The content of the portfolio will be assessed using the following criteria:

1. Evaluation of the content:

Coherent conception and, where applicable, execution of the work presented in line with advanced professional standards, in particular taking into account relevant aspects of design, urban planning, construction, structural and theoretical knowledge as well as the complexity of the work shown;

2. Range, identification and design of the portfolio:

Range and selection of the work presented; identification of the work or partial work of third parties by using the method of scientific citation of sources (e.g. in the case of group projects or assignments from architectural firms); suitable choice of presentation with particular consideration paid to the criteria of practicality, clarity and comprehensibility (content and structure) as well as aesthetic quality (referring to graphic means of presentation) or verbal skills (when using text as a means of presentation).

<sup>3</sup>The two Selection Committee members assess each of the two criteria independently, awarding up to 20 points for criterion 1 and a maximum of 10 points for criterion 2. <sup>4</sup>The points total will be calculated as the arithmetic means of the individual assessments, rounded up to the nearest full point.

5.1.2 The points total in the first stage will be calculated as the sum of the individual evaluations, with decimal places rounded up.

5.1.3 <sup>1</sup>Applicants with at least 43 points will be deemed suitable. <sup>2</sup>In those cases where it is determined that only some subject-specific requirements for the master's program are missing from undergraduate studies, the Commission may require that applicants complete fundamentals exams from the Bachelor's Degree Program Architecture amounting to a maximum of 30 credits. <sup>3</sup>These fundamentals exams must be successfully completed in the first year of study. <sup>4</sup>Failed fundamentals exams may be repeated only once and at the next examination date. <sup>5</sup>The Examination Board may make the admission to individual module examinations dependent on the successful completion of the fundamentals exam.

5.1.4 Applicants who have achieved less than 31 points fail the Aptitude Assessment.

## 5.2 Second Stage

5.2.1 <sup>1</sup>The remaining applicants will be invited to an assessment interview. <sup>2</sup>In the second stage of the aptitude assessment, the qualifications acquired in the bachelor's degree program and the result of the assessment interview are evaluated, whereby the qualification acquired in the bachelor's is to be weighted equally. <sup>3</sup>Interview appointments will be announced at least one week in advance. <sup>4</sup>Time slots for interviews must be scheduled before expiration of the application deadline. <sup>5</sup>The interview appointment must be kept by the applicant. <sup>6</sup>Conducting the aptitude assessment interview via video conference is possible upon a student's well-founded request. <sup>7</sup>If the video or audio transmission is disrupted, the interview can be continued after the disruption has been resolved or a follow-up appointment can be scheduled. <sup>8</sup>In the event of repeated disruption, the aptitude assessment interview may be scheduled as a face-to-face meeting in exception to Sentence 6. <sup>9</sup>Sentences 7 and 8 do not apply if it can be proven that the applicant is responsible for the disruption. <sup>10</sup>In this case, the aptitude assessment interview will be assessed. <sup>11</sup>If the applicant is unable to attend an aptitude assessment interview due to reasons beyond his/her control, a later appointment may be scheduled upon a student's well-grounded request, but no later than two weeks before the beginning of classes.

5.2.2 <sup>1</sup>The aptitude assessment interview is to be held individually for each applicant. <sup>2</sup>The interview lasts at least 20 but not more than 30 minutes for each applicant. <sup>3</sup>The interview will focus on the following topics:

1. exceptional motivation for the Master's Degree Program Architecture according to the criteria for assessing the written statement of purpose mentioned in No. 2.3.3,
2. notes on the previous work,
3. understanding of architectural issues (based on outlining a solution to an exemplary problem),
4. personal impression of the aptitude demonstrated by the ability to present statements convincingly using arguments and meaningful examples and to respond appropriately to questions asked (after the interview).

<sup>4</sup>The above topics may cover the documentation submitted according to 2.3. <sup>5</sup>Any subject-specific academic knowledge that is to be taught in the Master's Degree Program Architecture will not affect the decision. <sup>6</sup>With the applicant's approval, a representative of the student body may sit in on the interview.

5.2.3 <sup>1</sup> Each Committee member independently assesses each of the four areas with equal weighting. <sup>2</sup>Each member of the Committee will grade the result of the interview on a scale from 0 to 40, 0 being the worst and 40 being the best possible result. <sup>3</sup>The points total will be calculated as the arithmetic mean of the individual evaluations. <sup>4</sup>Non-vanishing decimal places must be rounded up.



5.2. 4 <sup>1</sup>The total number of points awarded in stage 2 is the sum of the points from 5.2.3 and the points from 5.1. 1 a) (grade) and 5.1.1 b) (portfolio of previous work). <sup>2</sup>Applicants with 62 or more points will be deemed suitable. <sup>3</sup>Applicants with an overall score of less than 62 points have failed the aptitude assessment.

### 5.3 Determination and Notification of Results

<sup>1</sup>Applicants will be informed of the results of the aptitude assessment through official notification. <sup>2</sup>Applicants not suited for the program will receive a letter of rejection stating the grounds for rejection and informing them of legal remedies.

5.4 Candidate's suitability for the program, once determined in aptitude assessment, applies to all subsequent applications for this program.

## 6. Documentation

<sup>1</sup>The aptitude assessment process must be documented, in particular the names of the participating members of the Selection Committee, the evaluation of the first and second stages, as well as the overall results. <sup>2</sup>The aptitude assessment interview must be documented, including the date, duration and location of the assessment, the names of the participating Selection Committee members, the applicant's name, and a list of main topics of discussion in bullet points.

## 7. Repeat Aptitude Assessments

Applicants who have failed an aptitude assessment may apply once to repeat the aptitude assessment process.

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Executed following a resolution of the Senate of the Technical University of Munich dated 25 January 2023 and approval of the President of the Technical University of Munich on 16 February 2023.

Munich, 16 February 2023

Technical University of Munich

Thomas F. Hofmann  
President

These Regulations were made available for inspection at the Technical University of Munich on 16 February 2023, following their announcement on 16 February 2023. Day of proclamation is therefore 16 February 2023.