

**Study and examination regulations of the Master's programme  
"Master of Science in Engineering" MSE  
of the FHNW School of Architecture, Construction and Geomatics, the  
FHNW School of Computer Science, and the FHNW School of Engineering  
and Environment**

from May 1<sup>st</sup>, 2025

*Note: This is an unsigned translation of the original document (in German) provided for your convenience. The original signed document is binding in case of differences between the documents. The legal language of FHNW is German and legal issues will generally be discussed in German. It may be possible to complete appeal procedures in English but there is no legal right to do so.*

Based on the cooperation contract for the implementation and further development of a joint offer of the Master of Science in Engineering MSE of 1 September 2020 and the framework regulations for the study programmes of the University of Applied Sciences and Arts Northwestern Switzerland (FHNW) for education aspects of 2 February 2015 (status 21 June 2021), the President of the Executive Board of the FHNW, at the request of the Director of the FHNW School of Architecture, Construction and Geomatics, the Director of the FHNW School of Computer Sciences, and the Director of the FHNW School of Engineering and Environment, issues the present study and examination regulations for the Master of Science in Engineering MSE programme of the FHNW School of Architecture, Construction and Geomatics, the FHNW School of Computer Science, and the FHNW School of Engineering and Environment.

## **Part 1: General**

### **§1 Scope**

<sup>1</sup> These study and examination regulations define the legal conditions for admission and acceptance, study, performance assessment and the award of the Master's degree in the "Master of Science in Engineering" MSE programme at the FHNW School of Architecture, Construction and Geomatics, the FHNW School of Computer Science, and the FHNW School of Engineering and Environment at the FHNW University of Applied Sciences and Arts Northwestern Switzerland.

### **§2 Further edicts**

<sup>1</sup> These study and examination regulations are supplemented by

- The list of modules of the MSE degree programme (which is available electronically on the central MSE homepage)
- The module and course descriptions of the participating universities of applied sciences
- The appendix with module recommendations (if available for the respective profile)

## **Part 2: Study**

### **§3 Admittance and admission to studies**

*Admittance criteria* <sup>1</sup>The admittance committee is responsible for checking the admittance requirements. Minimally the head of the degree programme and the person responsible for the corresponding profile constitute this committee.

*Recognition of equivalent admission certificates*

- <sup>2</sup> Prospective students are admitted to the programme if:
  - hold a Bachelor's degree or equivalent in a subject related field, and
  - hold a Bachelor's degree with very good grades (usually corresponding to an ECTS grade A or B), and
  - have passed the suitability assessment for the MSE Master's degree programme.
- <sup>3</sup> In exceptional cases, the respective FHNW schools may admit students 'sur dossier' and set time-limited conditions. These conditions are set out in the admission decision and listed in the individual study agreement. The minimum requirement for admission sur dossier is a recognised Bachelor's degree from a university.
- <sup>4</sup> Students who wish to transfer from another Master's programme must fulfil the admission requirements.
- <sup>5</sup> The head of the degree programme decides on the recognition of foreign admission certificates. The candidate must provide the necessary documents for an assessment by the head of the degree programme.
- <sup>6</sup> ECTS credits accounted for by previous a Master's degree programme that has not been completed must be declared in the admission procedure. Upon admission, the number of accountable ECTS credits required for the degree in each individual case is calculated. Admission to the degree programme is only possible if sufficient accountable ECTS credits are still available for the degree. The director of the relevant higher education institution decides on justified exceptions.
- <sup>7</sup> Admission to the degree programme is subject to the condition that there is no exclusion from an identical or comparable degree programme. The director of the respective FHNW school decides on justified exceptions upon application.
- <sup>8</sup> The number of available study places in the first year of the Master's programme is limited.
- <sup>9</sup> If the demand for study places exceeds the number of available study places, the study place restriction takes effect.
- <sup>10</sup> If the available study places are not sufficient to accommodate all admitted prospective students, places are allocated according to the ranking order of the final grades of the Bachelor's programme and, in the case of equal final grades, according to the time of registration.

*Recognition of academic credits*

- <sup>11</sup> Academic credits from previous studies will be recognized in accordance with § 7 para. 20.

**§4**

**Study structure**

*Structure*

- <sup>1</sup> The study programme is divided into modules.

*Modules*

- <sup>2</sup> A module is a conceptual teaching and learning unit that is completed in a defined time span. It is dedicated to a specific thematic or content-related focus and defined with specifically defined competences.
- <sup>3</sup> The module is the assessment unit and usually lasts one semester. Depending on the study mode (full-time or part-time), a subject-specific specialisation module can also extend over two semesters. This is specified by the advisors (§5 para. 1) in the individual study agreement.

4 Each module is assigned to one of the following categories:

Basic modules (central):

- Technical-Scientific Modules (TSM modules)
- Theoretical Foundation Modules (FTP modules)
- Context modules (CM modules)

Specialisation:

- Projects
- Supplementary courses (EVA)
- Master thesis

*Module Descriptions*

5 There exists a module description for each basic module. The module descriptions are openly published. They define:

- the module title;
- the designation (category);
- the requirements;
- the competences to be achieved;
- the learning content;
- the number of ECTS credits;
- the method of performance assessment and grading;
- the calculation of the module assessment (module grading).
- The module responsables

6 For each module of the specialisation, specific descriptions are prepared by the advisors and handed out to the students before the start of the module. These descriptions define:

- the module title;
- the topic;
- the learning content;
- the persons involved and their responsibilities;
- the number of ECTS credits;
- the dates; in the minimum start and end dates;
- the method of performance assessment and grading.

*Language of instruction*

7 Students must be able to follow lessons in the defined profile language (German or English). Language proficiency may be checked during the admission procedure.

## **§5**

### **Course of studies**

*Student advisory service*

1 Each student is assigned a study advisor. The English term "advisors" is used for the student advisors.

*Module types*

2 A distinction is made between two types of modules:

- Compulsory modules that must be completed and passed,
- Elective modules, a certain number of which must be selected from a module group and passed.

*Compulsory modules*

3 Compulsory modules are the basic modules determined by the advisors as well as the modules of the specialisation. In the case of the basic modules, at least two technical-scientific modules (TSM modules) and at least one theoretical foundation module (FTP module) must be selected from the modules recommended by the respective profiles.

*Supervision of Students*

<sup>4</sup> The advisors together with the student define an individual study plan based on the student's personal study goals. The individual study plan is reviewed at regular intervals and recorded in an individual study agreement (ISA).

<sup>5</sup> The modules to be attended are specified in the individual study agreement. The respective FHNW schools can set conditions for the choice of modules.

*Module registration*

<sup>6</sup> To attend a module, registration is required before the set registration deadline. The registration for the modules is also valid as registration for the performance assessments (exams) of this module.

<sup>7</sup> Registration for a module does not entitle the student to participate in the module.

<sup>8</sup> If a module is not carried out, the students concerned will be informed of this at the latest four weeks before the start of the semester in question. Registration for modules chosen as substitutes can subsequently be made up to two weeks before the start of the semester.

<sup>9</sup> Deregistration can be approved by the head of the degree programme up to three weeks after the start of the semester. Late registration for another module during this period will only be approved if it does not interfere with the proper running of the programme.

## **§6 Duration of studies**

*Standard period of study*

<sup>1</sup> The standard period of study lasts at least 3 semesters for full-time studies. If the degree programme is completed part-time, the standard period of study is extended accordingly.

<sup>2</sup> Changes between part-time and full-time studies are possible at the end of the semester for the coming semester.

*Maximum duration of study*

<sup>3</sup> The total duration of studies may not exceed 8 semesters. Interruptions of the studies do not count towards the total duration of studies. Study interruptions may not exceed a total of 4 semesters. The head of the degree programme may extend the maximum duration of studies by one semester at the request of the student.

<sup>4</sup> The director of the respective FHNW school may grant a further extension in justified cases.

## **§7 Study achievements**

*ECTS-Credit points*

<sup>1</sup> The "European Credit Transfer and Accumulation System" (ECTS) is used for the degree programmes. One ECTS credit point corresponds to an average of 30 hours of study (contact classes, guided and individual self-study, time spent on assessments, project work, thesis, etc.). Only whole ECTS credits are awarded for study achievements.

*Academic year*

<sup>2</sup> Studying full-time, the academic year corresponds to an average workload of 1800 hours or 60 ECTS credit points. Studying part-time, the academic year comprises correspondingly less working time and ECTS credit points.

*Performance assessment*

<sup>3</sup> The acquisition of competences in a module is evaluated with one or more performance assessments. The assessment of the performance records (performance evaluation) is carried out according to the module description either on 6-level or the 2-level grading scale.

- 4 The module description states how the performance assessment, and the module evaluation are carried out.
- 6-level scale*
- 5 On the 6-level grading scale, the module assessments are mathematically rounded to half grades. Performance assessments can show tenths of a grade.
- 6 The meaning of the grades on the 6-level scale is defined as follows:
- |     |                   |
|-----|-------------------|
| 6   | excellent         |
| 5.5 | very good         |
| 5   | good              |
| 4.5 | satisfactory      |
| 4   | sufficient        |
| 3.5 | just insufficient |
| 3   | insufficient      |
| 2   | bad               |
| 1   | very poor         |
- 2-level scale*
- 7 The 2-level grading scale includes the levels "fulfilled" and "not fulfilled".
- Passing the module*
- 8 A module is passed if it is assessed either with at least module grade 4 or with "fulfilled".
- 9 For a passed module, the full number of ECTS credit points assigned to the module are awarded, for a failed module no ECTS credit point is awarded.
- Validity of ECTS credit points*
- 10 ECTS credit points are valid for 10 years from the date of acquisition. The director of the respective FHNW school may approve requests in writing for an extension of the validity of the ECTS credit points already acquired.
- ECTS grades*
- 11 In addition, ECTS grades can be disclosed. The ECTS grades A to E result from a relative allocation of the performances within the satisfactory results:
- |   |   |
|---|---|
| A | The best 10% of the performance assessments |
| B | the next 25% of performance assessments     |
| C | the next 30% of the performance assessments |
| D | the next 25% of performance assessments     |
| E | die next 10% of the performance assessments |
| F | Not passed                                  |
- If fewer than 30 students have received a satisfactory grade in a module, the module will only be awarded a grade.
- Performance assesement*
- 12 The examining lecturer is responsible for the performance assessment of a module.
- 13 The grades for the assessment of the modules in the categories "Technical-Scientific", " Theoretical Foundations" and "Context" are based on the results of performance assessments during the semester and/or an examination to be taken during the examination session directly following module attendance.
- 14 An unjustified missed module examination is assessed with grade 1.0 or ECTS grade F respectively. In the case of a justified missed module examination (§10.4), the examination can be repeated later.
- 15 When assessing the Master thesis, external experts work together with the supervising lecturer. The respective FHNW schools appoint these experts.
- Modules not passed*
- 16 A failed module can be repeated once. The repetition of basic modules takes place either as part of the centrally organised repeat examination or by repeating the entire module.

- Module repetition* <sup>17</sup> A passed module cannot be repeated.
- Performance record* <sup>18</sup> The academic achievements are disclosed per semester by means of a transcript of records. It includes all modules completed in this semester with the corresponding performance assessments and the ECTS credit points awarded and is to be issued as an appealable decision with instructions on how to appeal. The transcript of records is provided to students in electronic form via a secure delivery platform.
- Inspection of records* <sup>19</sup> Inspection of examination records is granted upon request after the provision of the transcript of records. Requests to inspect the records must be submitted electronically to the respective school administration.
- Recognition of ECTS credit points* <sup>20</sup> Modules successfully completed at other higher education institutions, other formal education at tertiary level, non-formal education within the meaning of the Federal Act on Continuing Education as well as practical achievements may be accredited if they are proven and recognised as equivalent by the relevant FHNW school. The head of the degree programme makes the final decision on credit accreditation.
- Oral examinations* <sup>21</sup> For oral examinations, the presence of a second person in addition to the examiner is necessary. In justified exceptional cases, an audio or video recording is permitted instead of a second person.

## **§8 Intellectual property**

- FHNW rights* <sup>1</sup> The FHNW has the right to use the intellectual property of student work together with the students.
- Deviations* <sup>2</sup> Agreements deviating from para. 1 must be agreed in writing.
- Authorship rights* <sup>3</sup> Students retain the right to be named as authors.

## §9

### Graduation

#### *Successful graduation*

- 1 The degree programme is successfully completed when 90 ECTS credits have been acquired in accordance with Para. 2 and all other requirements in accordance with the study and examination regulations have been met.
- 2 The following additional requirements apply for successful graduation:
  - a. All compulsory modules were passed.
  - b. 30 ECTS credits were acquired with the Master's thesis.
  - c. 30 ECTS credits were acquired with modules from the category "Specialisation" with projects and supplementary events.
  - d. 30 ECTS credits were acquired with modules from the categories "Technical-scientific modules", "Theoretical foundations" and "Context", of which at least
    - 12 ECTS credits with modules from the category "Technical-scientific modules",
    - 9 ECTS credits with modules from the category "Theoretical foundations",
    - 6 ECTS credits from the category "Context modules".
- 3 Upon successful completion of the programme, the academic title "Master of Science FHNW in Engineering mit Vertiefung in [name of profile]" or in English "Master of Science FHNW in Engineering with a specialization in [name of profile]" is awarded.

#### *Additional documents*

- 4 Together with the diploma certificate, the following documents are handed out:
  - a Diploma Supplement according to the model developed by the European Commission, the Council of Europe and UNESCO/CEPES, which informs about the profile of the study programme, the assessment scheme (grades and/or ECTS grades) and the higher education institution and
  - a cumulative transcript of records ("ToR") with the modules passed and the corresponding performance assessments as well as the topic of the thesis.

#### *Date of graduation*

- 5 The diploma is awarded when the President of the Directorate and the Director of the respective FHNW school sign the diploma certificate (date on the diploma certificate). Exmatriculation takes place at the end of the semester following graduation or immediately after graduation in the case of graduation after the end of the semester.

#### *Extraordinary or early termination of studies*

- 6 The study programme is terminated prematurely or extraordinarily by deregistration or exclusion. Exmatriculation takes place immediately after successful deregistration or after the exclusion order has become final.

- Unsubscription* <sup>7</sup> Withdrawal from the degree programme is only possible at the end of a semester after presentation of the transcript of records. If there are important reasons, the head of the degree programme may authorise withdrawal at another time.
- Exclusion* <sup>8</sup> Exclusion occurs when:
- a. a compulsory module is not passed even after retaking the examination or repeating the module;
  - b. the required number of ECTS credit points for a module group (cf. §9 para. 2 lit. d) can no longer be achieved due to failure to pass compulsory elective modules;
  - c. if, in the case of admissions sur dossier (cf. §3 para. 3), the conditions have not been fulfilled within the specified period;
  - d. if modules and repetitions totalling more than 30 ECTS credits have been completed but not credited over the entire duration of the course;
  - e. the maximum permissible duration of study is exceeded;
  - f. in the event of serious breaches of obligations.
- <sup>9</sup> The director of the respective FHNW school may grant exceptions to Para. 8, lit. a to e in justified cases.
- <sup>10</sup> At the request of the advisors, the programme management may approve exceeding the limit of 120 registered ECTS credit points for the repetition of the Master's thesis.
- <sup>11</sup> In the event of early or extraordinary termination of studies, a cumulative transcript of records ("transcript of records", ToR) with the modules passed and the performance assessments as well as an accounting sheet in the event of exmatriculation (exmatriculation statement) are issued.
- <sup>12</sup> The accounting sheet in the case of exmatriculation shows the total of all study achievements with the consumed ECTS credits and indicates that the study programme in question at the higher education institution was terminated extraordinarily or prematurely.

## **Part 3: Rights and obligations of students**

### **§10**

#### **Rights**

- <sup>1</sup> Students have the right to study at the relevant higher education institution for the duration of their enrolment and in particular:
- a. attend courses as part of the degree programme;
  - b. to complete performance assessments;
  - c. receive their ECTS credit points in a transcript of records;
  - d. to use the studios, libraries or media libraries, computer facilities, laboratories, other facilities and the IT infrastructure for study purposes;
  - e. make use of the special facilities for university members (e.g., university sports), counselling opportunities and discounts offered by the university;
  - f. to contact the individual lecturers and the university and FHNW bodies in personal, student or FHNW-related matters.
- Access to Information* <sup>2</sup> Students have access to information relevant to their studies, such as study and examination regulations, rules, directives and guidelines.

*Compensation of disadvantages* <sup>3</sup> Appropriate account must be taken of any disadvantage suffered by prospective students or students due to a disability or impairment. The head of the degree programme decides on appropriate measures at the request of the student.

## §11

### Obligations

- <sup>1</sup> Students have the obligation to
- a. take the modules/courses prescribed in the study and examination regulations and in the module descriptions in order to acquire the corresponding ECTS credit points;
  - b. pay the fees in accordance with the FHNW fee directive;
  - c. The students are required to work independently and on their own on all individual assignments;
  - d. to respect copyrights and to refrain from plagiarism;
  - e. Not to gain any unlawful advantage for themselves or others when completing assignments and to use only the permitted aids;
  - f. to keep themselves informed about study operations and to ensure their availability by mail to the address given to the FHNW and e-mails to the FHNW delivery address (account) assigned to them;
  - g. agree to receive electronic dispositions via a secure platform;
  - h. Students residing abroad are obliged to receive all orders electronically via a secure delivery platform;
  - i. to have at their disposal objects or equipment (e.g. computers) determined by the university to be necessary for their studies;
  - j. to comply with the provisions of the general legal regulations relevant to the status of students, all written regulations of the FHNW such as, for example, the orders, regulations, guidelines, directives, orientations and directions and the general rules of decency;
  - k. to regularly inform themselves about changes in the regulations of the FHNW;
  - l. keep secret information in which the FHNW or one of its partner organisations has an interest in secrecy;
  - m. to safeguard the interests of the FHNW.

*Compulsory attendance* <sup>2</sup> Students must comply with any specified attendance requirements for teaching and learning units.

*Obligation to report* <sup>3</sup> If attendance at performance assessments is compulsory but not possible for important reasons (cf. §11, para. 4), the education administration of the respective university must be notified immediately.

*Reasons for exemptions* <sup>4</sup> Excuses for absences include, in particular, accident and illness, performance of family obligations that cannot be delegated, refusal to take the necessary leave during service in the army, civil defence and civilian service as well as force majeure. Corresponding certificates must be submitted immediately.

*Medical examiner*

<sup>5</sup> A medical examiner may be consulted to verify reasons for excuses according to Para. 4 and to grant compensation for disadvantages according to § 10 para. 3.

*Check for plagiarism*

<sup>6</sup> Student work may be checked for potential plagiarism using technical aids.

*Violations*

<sup>7</sup> Violation of the student obligations according to § 11 para. 1 lit. c, d and e, unexcused violation of attendance obligations according to § 11 para. 2 as well as non-compliance with submission deadlines usually results in the performance assessment "not fulfilled" or the grade 1. If a violation only becomes known later, the performance assessment must be changed accordingly and, if necessary, the diploma must be withdrawn by the director. In addition, the university may initiate disciplinary proceedings in accordance with § 12.

## **§12**

### **Disciplinary proceedings**

<sup>1</sup> If an above-mentioned obligation is breached, one or more disciplinary measures may be imposed in accordance with para. 2, depending on the nature and severity of the breach.

<sup>2</sup> Measures envisaged include in particular:

- a. notice of miss;
- b. temporary or permanent restriction of rights of use;
- c. temporary or permanent exclusion from studies.

<sup>3</sup> The measures pursuant to para. 2 shall be issued as a reasoned decision. Measures pursuant to para. 2 lit. b and c shall also be accompanied by instructions on how to appeal.

<sup>4</sup> The students must be heard before any decision is taken.

<sup>5</sup> Measures pursuant to para. 2 lit. c shall be ordered by the director of the respective FHNW school.

## **Part 4: Administration of justice**

### **§13**

#### **Dispositions**

*Dispositions of the programme management*

<sup>1</sup> The following are to be issued as dispositions by the head of the degree programme:

- a. Decisions on admittance and admission in accordance with §3 of these study and examination regulations;
- b. Decisions on the extension of the maximum period of study and interruptions of studies § 6.3.
- c. Certificates of achievement in accordance with § 7.19 of these study and examination regulations.
- d. Decisions on exclusion in accordance with § 9 para. 8, lit. a to d of these study and examination regulations.
- e. Decisions on compensation for disadvantages in accordance with § 10 para. 3.
- f. Measures pursuant to § 12, para. 2, lit. a and b of these study and examination regulations.

*Dispositions of the Director*

- 2 The following are to be issued as dispositions of the Director:
  - a. Decisions on exceptions according to § 3 para. 6 and 7 of these study and examination regulations.
  - b. Decisions on exceptions in accordance with § 9 para. 8 lit. c and e of these study and examination regulations.
  - c. Decisions on measures pursuant to § 12 para. 2 lit. c of these study and examination regulations.

*Delivery*

- 3 Orders of the director or the university shall be served in writing and with an appeal notice by post or in electronic form via a secure delivery platform.
- 4 Decisions pursuant to § 12 para. 2 lit. a of these study and examination regulations are not appealable.

**§14**

*Objection-procedure*

**Objections**

- 1 An objection to an order pursuant to § 13 para. 1 shall be submitted in writing to the Director within 14 days of its issuance, stating the grounds for the objection.
- 2 The objection must contain a clearly defined request and the signature of the objector or the person(s) representing him/her.
- 3 Objections against rulings issued by post must be submitted by post. Objections against electronically transmitted benefit statements must be submitted by post or electronically.
- 4 Students must be granted access to their records as part of the objection procedure.
- 5 The objector shall be heard in the objection procedure. This hearing shall be recorded in the files.
- 6 The director of the respective FHNW school examines the objection, the statements of the lecturers involved and the head of the degree programme as well as the hearing and issues a written objection decision.

**§15**

*Complaint procedure*

**Complaints**

- 1 An appeal against an objection decision or an order of the Director may be lodged in writing with the Appeals Commission within a non-extendable period of 30 days from the date of its notification, stating the grounds for the appeal.
- 2 Appeals against objection decisions and rulings must be submitted by post to:

Beschwerdekommision FHNW  
Klosterzelgstrasse 2  
5210 Windisch
- 3 The complaint must contain a clearly defined request and the signature of the appellant or the person(s) representing him or her. A copy of the contested order or the contested objection decision must be enclosed with the appeal.
- 4 A review of performance assessment under the complaint procedure is only carried out with regard to abuse and arbitrariness.
- 5 The appeal procedure is subject to a fee. The Administrative Jurisdiction Act of the Canton of Aargau shall apply.

**§16****Forfeiture**

- <sup>1</sup> The right to have an objection or appeal dealt with shall be deemed to have been forfeited if the time limits set are not complied with.

**Part 5: Final and transitional provision****§17****Coming into force**

- <sup>1</sup> These study and examination regulations come into force on May 1<sup>st</sup>, 2025. They replace the study and examination regulations of the Master's programme "Master of Science in Engineering" MSE of the School of Engineering and the School of Architecture, Civil Engineering and Geomatics of 1 September 2022.
- <sup>2</sup> For students who commenced their studies before the autumn semester 2025/26, the study and examination regulations for the Master of Science in Engineering MSE programme at the FHNW School of Engineering and the FHNW School of Architecture, Construction and Geomatics dated 1 September 2022 will continue to apply until the start of the autumn semester 2025/26. Any objection procedures still pending at this time will still be dealt with in accordance with the existing study and examination regulations.
- <sup>3</sup> From the start of the autumn semester 2025/26, all students enrolled on the Master's degree programme are subject to these study and examination regulations in accordance with § 1 para. 2.

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