

# Academic Regulations governing the Masters's Degree Programme in Applied Information and Data Science at the Lucerne School of Business

of 1 September, 2023

*(These Regulations are translated from and hence based on the "Studienreglement für die Master-Ausbildung in Applied Information and Data Science an der Hochschule Luzern – Wirtschaft". The German version shall be authoritative.)*

*The Dean of the Lucerne School of Business,*

pursuant to article 1 paragraph 2 and paragraph 1 letter a of the Academic Ordinance Governing Bachelor's and Master's Degree Programmes at the Lucerne University of Applied Sciences and Arts, FH Zentralschweiz, of 13 June 2014<sup>1</sup>

*hereby enacts the following:*

## **I. General**

### **Art. 1** *Principle*

<sup>1</sup> The master's degree in Applied Information and Data Science is a multidisciplinary programme in the fields of business, information technology, technology, and art and design.

<sup>2</sup> These academic regulations contain the rules pertaining to the academic ordinance governing degree programmes at the Lucerne University of Applied Sciences and Arts, FH Zentralschweiz.

### **Art. 2** *Purpose*

The master's degree in Applied Information and Data Science at the Lucerne University of Applied Sciences and Arts is a specialised scientific course of education based on the latest national and international educational standards and catering for current professional requirements in the field of applied data sciences.

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<sup>1</sup> SRL No. 521

**Art. 3** *Admission to the programme*

<sup>1</sup> To be considered for admission to the master's degree, applicants must

- a. possess a bachelor's degree from a recognised academic university or university of applied sciences or equivalent qualification comprising at least 180 ECTS credits,
- b. submit an application dossier in accordance with the guidelines issued by the head of programme, and
- c. have sufficient language skills in English.

<sup>2</sup> In order to ensure the success of the studies, the head of programme can evaluate the student's basic aptitude as well as specific technical, methodological and linguistic competences by means of additional measures (e.g. aptitude interviews and tests) and make admission to the master's programme conditional upon the outcome of these clarifications.

**Art. 4** *Crediting of prior learning at other institutions*

<sup>1</sup> Upon formal request, prior learning and examination results can be credited, provided that they are deemed to be equivalent. Decisions regarding the crediting rest with the head of programme.

<sup>2</sup> Assessed assignments taken and passed during an exchange programme at a partner or other educational establishment will be recognised and credited provided that

- a. a learning agreement approved by the head of programme was concluded before the student started the exchange programme,
- b. the learning outcomes achieved during the exchange programme represent an equivalent substitute, a deepening or a meaningful extension of the learning contents of the master's degree in Applied Information and Data Science, and
- c. the learning outcomes achieved during the exchange programme are documented in a transcript of records issued by the host university.

<sup>3</sup> To complete the master's degree in Applied Information and Data Science at the Lucerne University of Applied Sciences and Arts, at least 60 ECTS credits must have been earned during this master's programme.

**Art. 5** *Recognition of relevant professional activity*

<sup>1</sup> If the student has acquired vocational competencies taught in the programme before the commencement of studies or during the programme, the relevant professional activity may be recognised to the extent of 12 ECTS credits maximum.

<sup>2</sup> Relevant professional activities will be credited if they

- a. are contractually agreed as professional activity, vocational training programmes, project work, freelance work or similar,
- b. demonstrably impart, use or deepen skills that are normally taught during the programme,
- c. are confirmed in terms of content and time by the contracting party or client.

<sup>3</sup> Relevant professional activities will be credited only if completed during the programme.

<sup>4</sup> The decision as to whether and to what extent the professional activity is relevant and thus is admissible for crediting rests with the head of programme.

<sup>5</sup> Relevant professional activities are credited towards the learning outcome requirements in the required elective area. The choice of recognition method rests with the head of programme.

#### **Art. 6** *Language model*

<sup>1</sup> The master's degree programme is offered in English.

<sup>2</sup> Written teaching materials are usually provided in English.

<sup>3</sup> The decision whether to complete the oral and written assessed assignments in German or English rests with the students.

#### **Art. 7** *Leave of absence*

<sup>1</sup> Students may take leave of absence. Leave of absence lasts for a maximum of one semester and is granted only once during the entire period of study. Leaves of absence must be notified to the programme secretariat at the earliest opportunity.

<sup>2</sup> During a leave of absence, students remain enrolled but do not pay tuition fees. The time spent on the leave of absence does not count towards the period of study.

<sup>3</sup> In exceptional and duly substantiated cases, the head of programme may grant leave of more than one semester, or an additional period of leave.

## **II. Governing bodies**

#### **Art. 8** *Schools' Steering Group*

<sup>1</sup> The Schools' Steering Group is the strategic steering committee that has oversight of the master's degree in Applied Information and Data Science. It ensures that the programme meets high standards in terms of an interdisciplinary, scientifically founded, applied and internationally oriented master's degree in the field of applied data sciences. The strategic management principally makes use of the following instruments. The Schools' Steering Group

- a. formulates the guidelines governing the strategic development of the degree programme,
- b. defines the requirements in respect of quality and risk management,
- c. defines the guidelines for the admission and enrolment procedure of the master's programme,
- d. formulates the requirements for assessing the achieved learning expectations of the master's programme ("assurance of learning"),
- e. defines the measures governing the cross-departmental marketing and communication of the master's programme,
- f. represents the programme vis-à-vis the senior management of the cooperating Schools,
- g. pronounces on all other cross-School aspects insofar as no other superordinate regulations or otherwise defined division of responsibility is provided for.

<sup>2</sup> The Schools' Steering Group comprises the Heads of Bachelor's and Master's Programmes of the cooperating Schools as well as the Head of Programme in the role of an advisor and as the group's executive.

#### **Art. 9** *Head of programme*

<sup>1</sup> The head of programme bears integral operational responsibility for the degree programme. In particular, his or her duties include:

- a. overall responsibility for the concept and delivery of the programme,
- b. workload planning and financial control of the programme,
- c. course-related leadership of the programme management team (subject heads, module heads),
- d. responsibility for quality management related to the degree programme,
- e. delivering the admission and enrolment procedure,
- f. advising students,
- g. planning and organising the teaching and examinations and deciding on the award of doctoral degrees,
- h. conducting appeal procedures and imposing disciplinary measures,
- i. planning and implementing course-related marketing and communication activities and the acquisition of students,
- j. maintaining programme-specific international partnerships,
- k. representing the programme in School-specific management committees.

<sup>2</sup> The head of programme has the authority to give instructions to the heads of module and the lecturers in the programme concerning all matters described under letters a to k.

<sup>3</sup> The participating Schools are jointly responsible for the content of the modules and the development of the programme. The head of programme remains in regular contact with the Schools.

#### **Art. 10** *Heads of module*

<sup>1</sup> The heads of module are responsible for the subject- and content-related coordination and development of their modules, as well as for subject- and content-related coordination with the other heads of module, insofar as no other division of responsibility is provided for. In particular, their duties include

- a. coordinating the learning content of their modules,
- b. coordinating learning content across modules,
- c. implementing quality control and quality assurance measures in their modules,
- d. organising and coordinating the assessed assignments and the validation of the results in their modules.

<sup>2</sup> The heads of module are authorised to issue instructions to the lecturers of their modules in all matters referred to in a-d.

**Art. 11** *Lecturers*

<sup>1</sup> The lecturers offer instruction in accordance with the didactic quality standards of the Lucerne University of Applied Sciences and Arts.

<sup>2</sup> Lecturers' responsibilities include, in particular, the provision of academic support for students outside the actual course-related events.

<sup>3</sup> Lecturers are obliged to collaborate on the design and delivery of modules.

<sup>4</sup> Lecturers are responsible for designing, assessing and grading the assessed assignments in their thematic areas.

**Art. 12** *Experts*

External experts may be appointed for the evaluation of assessed assignments (specifically, in the case of master's theses and of practice projects).

**III. Programme structure and modules****Art. 13** *Flexible study track*

<sup>1</sup> The master's degree in Applied Information and Data Science is offered as a flexible study track.

<sup>2</sup> Within the framework of the regulations, students are free to decide how much time they devote to their studies and the learning requirements they wish to meet each semester.

<sup>3</sup> The standard curriculum consists of four semesters comprising 30 ECTS credits of learning per semester.

<sup>4</sup> Students must register for all modules they wish to attend the following semester by a designated date. Students may revoke their registration until the designated withdrawal deadline, after which they are definitely registered for the module and its assessed assignments.

<sup>5</sup> If a student withdraws from a module, his or her academic performance and assessed assignments completed until that point will not be recognised. The module is not considered to have been attended.

<sup>6</sup> The maximum duration of study may not exceed eight semesters. In exceptional and duly substantiated cases, the head of programme may grant an extension to the duration of study.

<sup>7</sup> The head of programme has the right to impose limitations on the flexible study track if they are necessary for the proper delivery of the programme.

**Art. 14** *Programme structure*

<sup>1</sup> The master's degree in Applied Information and Data Science is based on the core skills required by the professional field of applied data sciences. These core skills are represented in the master's programme in the form of teaching areas. The focal points of the teaching areas are delivered as modules.

<sup>2</sup> The master's degree programme consists of

- a. a core area,
- b. a required elective area,
- c. a master's thesis.

<sup>3</sup> The core area is composed of modules designed to expand on the skills presented by students when they enrol, especially in the fields of information technology and statistics. Also students acquire fundamental technical and analytical competencies in the field of applied data sciences. The core area amounts to 39 ECTS credits.

<sup>4</sup> The required elective area consists of modules that consolidate aspects of the applied data sciences or provide applied experience in specific areas. Students are free to choose their modules. However, the head of programme may introduce additional regulations in the required elective area. In terms of workload, the required elective area amounts to 51 ECTS credits.

<sup>5</sup> The master's thesis project consists of a preliminary study and the thesis itself. In terms of workload, the master's thesis amounts to 30 ECTS credits.

#### **Art. 15** *Modules and module descriptions*

<sup>1</sup> Modules are time-limited teaching/learning units devoted to specific thematic or topical focal points and imparting precisely defined skills.

<sup>2</sup> Modules are typically completed within one semester and comprise 3 ECTS credits or a multiple thereof.

<sup>3</sup> The master's programme distinguishes between two types of module:

- a. Compulsory modules, which are mandatory for all students, and
- b. Required elective modules, which students attend according to a certain number of ECTS credits.

<sup>4</sup> Each module has a module description which, among other things, provides information on the entry requirements, the learning contents and learning objectives, the proportion of contact study and self-study, the type and weighting of the assessed assignments that must be taken, and any requirements governing admission to the assessed assignments, e.g. attestations, attendance requirements.

#### **Art. 16** *Master's thesis*

<sup>1</sup> Students are admitted to the master's thesis if

- a. the preliminary study received a grade of 4.0 or higher,
- b. modules to the extent of at least 84 ECTS credits have been attended.

<sup>2</sup> The preliminary study and master's thesis represent a whole in terms of content. The master's thesis builds on the methodological and topical findings of the preliminary study.

<sup>3</sup> The master's thesis must be written and submitted within the specified time limit.

<sup>4</sup> The process and the conditions relating to the development of a master's thesis are defined in the regulations governing the pre-study and master's thesis.

## **IV. Assessed assignments: Delivery**

### **Art. 17** *Delivery of assessed assignments*

<sup>1</sup> At least one assessed assignment is required to pass a module.

<sup>2</sup> Where a module specifies more than one assessed assignment, the module description stipulates the weighting of the assignments and the requirements that must be met to pass the module.

<sup>3</sup> The requirements of the assessed assignments, the assessment criteria and the grades are based on the learning objectives defined in the module descriptions.

<sup>4</sup> Assessed assignments must be completed within the same period as the module. Exceptions to this rule may be granted by the head of programme upon reasoned request.

### **Art. 18** *Requirements governing admission to assessed assignments*

Decisions regarding the imposition of additional requirements for admission to the assessed assignments of modules (e.g. attestations, attendance requirements) rest with the relevant heads of module. The requirements must be justifiable in the sense that they are needed for the acquisition of skills and knowledge.

### **Art. 19** *Examiners of assessed assignments*

<sup>1</sup>As a rule, assessed assignments are delivered, assessed and graded by the lecturers delivering the corresponding learning content.

<sup>2</sup>If assessed assignments or parts of them are prepared, delivered and assessed by external lecturers, the heads of module are required to ensure that the internal guidelines and standards are observed.

<sup>3</sup>The delivery and marking of the following types of assessed assignment are always carried out by the principal lecturer and a second lecturer (double-check principle):

- a. Oral assessed assignments (e.g. oral module examinations, presentations, reports) accounting for one third or more of the module grade, and
- b. The master's thesis.

In both cases, the principal lecturer decides the grade in agreement with the second lecturer. The final decision rests with the principal lecturer.

<sup>4</sup> External or internal experts who do not teach in the module may also be appointed as second assessors. Their appointment must be justifiable in terms of content and requires approval by the head of programme.

### **Art. 20** *Verification of oral assessed assignments*

For the purpose of verifying a student's performance during an oral assessed assignment, an audio or audiovisual recording may be made provided all persons present expressly agree to this. The examining lecturer shall inform the persons present in advance. The recordings are deleted after expiry of the time limit for appeal or after appeal proceedings have been completed.

**Art. 21** *Resources for assessed assignments*

Students will normally be informed about permissible resources at the beginning of the semester but no later than six weeks prior to the date on which the assignments take place or begin.

## **V. Assessed assignments: Grading**

**Art. 22** *Grading of assessed assignments*

<sup>1</sup> The grading of assessed assignments adopts a scale of 6 to 1.

<sup>2</sup> The grades have the following designations:

6 = very good	5 = good
4 = sufficient	3 = insufficient (fail)
2 = weak (fail)	1 = very weak (fail)

<sup>3</sup> The pass grade for an assessed assignment is 4.0.

<sup>4</sup> The numerical grades awarded to individual assessed assignments within a module are expressed using the grade points outlined in paragraph 2 to the nearest tenth of a grade.

<sup>5</sup> The terms "pass" or "fail" can be used instead of a numerical grade.

<sup>6</sup> In the case of group work, all the group members receive the same grade, unless the contributions of individual group members to the overall achievement can be sufficiently distinguished and assessed.

**Art. 23** *Determination of module grades*

<sup>1</sup> The module grade is derived from the grade(s) awarded to the module's assessed assignment(s).

<sup>2</sup> Where a module has more than one assessed assignment, the module grade is derived from the weighted average of the grades of the individual assignments.

<sup>3</sup> Likewise if an assessed assignment consists of partial assignments, its grade is derived from the weighted average of the grades of its partial assignments.

**Art. 24** *ECTS grading*

<sup>1</sup> ECTS grading of modules is as follows:

- a. Of those students obtaining a pass grade, the best 10 percent receive the top A grade, the next 25 percent a B grade, the following 30 percent a C grade, the following 25 percent a D grade and the final 10 percent an E grade. Insufficient achievements attract an FX (failed, but improvement permitted) or an F (failed, but one retake permitted).
- b. In the case of module grades where fewer than 25 students achieve a pass, ECTS grades can be awarded linearly to the numerical grades.

<sup>2</sup> A failed module consisting of two or more graded assessed assignments attracts the ECTS grade F.



<sup>3</sup> Insufficient module grades with a rounded numeric grade of 3.5 based on a single graded assessed assignment will be given an ECTS FX grade. Failed assessed assignments within a module graded FX can be retaken or improved. The head of module decides on the modalities.

<sup>4</sup> Only one retake or improvement is granted in case of an FX grade. It must be completed by the end of the subsequent semester. The grade achieved will fully replace the insufficient grade of the previous semester.

## **VI. Assessed assignments: modules retakes and award of ECTS credits**

### **Art. 25** *Award of ECTS credits*

<sup>1</sup> The ECTS credits for a module are awarded when the module is passed.

<sup>2</sup> Students receive the full number of ECTS credits allocated to a module if they pass the module.

<sup>3</sup> No ECTS credits are awarded if the module is failed.

### **Art. 26** *Retaking of modules*

<sup>1</sup> If the requirement for the award of ECTS credits in a module is not met, the module can be repeated once. The student need retake only as many assessed assignments as necessary to meet the criteria for passing the module.

<sup>2</sup> Retakes are subject to the conditions that apply to the module versions in force at the time of the retake.

<sup>3</sup> Retakes do not require the student to re-attend the relevant module. In point of fact, the student is not entitled to attend the module.

<sup>4</sup> If the module is such that retaking it would require reattendance of the course-related event, the head of module may instead mandate an improvement on the assessed assignment for it to reach a 4.0 grade.

<sup>5</sup> If a compulsory elective module has to be retaken, a different compulsory elective module can be selected for the retake. In this case, the newly selected module cannot be retaken if it is failed.

<sup>6</sup> Either way, the grade of the retake replaces the grade of the first attempt. This also applies in the event of unjustified omissions and dishonest conduct involving the retake.

### **Art. 27** *Goodwill regulation*

If there remains no more than one module which has been definitively failed (i.e. the retake has been failed as well), and provided the grade of this module is not inferior to 3.5, it can be retaken a second time. The second retake is subject to the provisions outlined in article 26 paragraph 1. This option of a second retake is only granted once over the course of study and across modules.

**Art. 28** *Renewed attempt at the master's thesis*

If a master's thesis receives a 3.5 grade, there is an option to elevate this initial grade to a 4.0 (pass) grade through an improvement. If the thesis receives a lower grade, a renewed attempt with a different topic will be granted.

**Art. 29** *Transcript of records*

Each semester, students receive a transcript of records that relates to the modules completed in that semester. The transcript of records lists the modules completed with the corresponding grades and ECTS credits awarded.

**Art. 30** *Extraordinary termination of studies*

<sup>1</sup> If the possible second retake of a module is failed as per article 27, the student may no longer participate in the master's programme.

<sup>2</sup> Together with the notice of removal from the register of students, the student receives a transcript of records listing all the assessed assignments for all the modules completed and indicating that the course of study in this degree programme has been definitively failed.

## **VII. Assessed Assignments: Information and reporting obligations**

**Art. 31** *Information obligation in the case of assessed assignments*

If in doubt, students are required to make every effort to obtain the relevant information on the objectives, contents and forms of assessed assignments.

**Art. 32** *Inability to attend or withdrawal from assessed assignments*

<sup>1</sup> Candidates prevented from taking an assessed assignment by compelling reason must inform the head of programme immediately and submit a written application to withdraw.

<sup>2</sup> In the event that such a situation arises immediately prior to or during assessed assignment, the candidate must notify the head of programme or lecturer concerned immediately, if possible in writing.

<sup>3</sup> The assertion of reasons applicable to an assessed assignment already completed is excluded in the event the candidate was aware of them before or during the assessed assignment.

<sup>4</sup> If medical grounds are quoted, a medical certificate must be produced. Where doubt exists, the University may engage an independent medical examiner.

<sup>5</sup> The decision regarding the approval of a withdrawal from or curtailment of an assessed assignment rests with the head of programme.

<sup>6</sup> Candidates failing to complete an assessed assignment or discontinuing one that has already begun without approval or compelling reason will be deemed to have failed the assignment concerned and will be awarded the grade of 1.0.

<sup>7</sup> Assessed assignments not completed for compelling reason may be retaken at the earliest when next scheduled.

**Art. 33** *Observance of deadlines and time limits*

<sup>1</sup> Deadlines and time limits in connection with the overall programme (including registering for and withdrawing from modules and assessed assignments) must be observed. Anyone unable to meet a deadline or time limit for compelling reasons (e.g. illness) must inform the person responsible for the deadline or time limit prior to the deadline or expiry of the time limit.

<sup>2</sup> Students failing to observe registration or withdrawal deadlines and to provide compelling reason are deemed to not have registered for, or withdrawn from, a programme.

## **VIII. Offer und delivery of modules**

**Art. 34** *Periodicity of modules*

The modules are offered according to schedule if the requirements pursuant to article 35 are met.

**Art. 35** *Delivery of modules*

<sup>1</sup> Modules are delivered if sufficient registrations have been received and if this is compatible within the framework of delivering an orderly course of study.

<sup>2</sup> The decision regarding the delivery of modules rests with the head of programme.

<sup>3</sup> Students affected by the non-delivery of a module will be informed accordingly. They may register for other modules offered in that academic year up to the deadline set by the head of programme. Late registrations will be taken into account as far as possible within the framework of delivering an orderly course of study.

**Art. 36** *Registration for, and withdrawal from, modules*

The head of programme regulates the modalities of registration for, and withdrawal from, modules.

**Art. 37** *Admission to modules*

<sup>1</sup> Attendance of a module is predicated on meeting the requirements described in the module description. Students not meeting these requirements will not be admitted to the module.

<sup>2</sup> As a rule, modules can be attended even if prerequisite modules have been completed but the ECTS credits have not yet been awarded due to a failed assessed assignment.

<sup>3</sup> There is no entitlement to a place on a particular module or particular delivery of a module.

## **IX. Conditions for obtaining the master's degree**

### **Art. 38** *Master's degree*

<sup>1</sup> The master's degree programme has been successfully completed if

- a. all the modules stipulated by these academic regulations have been successfully completed,
- b. the master's thesis has been submitted and awarded a grade of 4.0 or higher, and
- c. the 120 ECTS credits stipulated by these academic regulations have been earned.

<sup>2</sup> Upon successful completion of studies, the academic title of "Master of Science Hochschule Luzern/FHZ in Applied Information and Data Science" is awarded.

<sup>3</sup> The following are issued at the same time as the master's degree certificate:

- a. A diploma supplement in German and English providing information on the profile of the degree programme, the ECTS grading system applied and the university, and
- b. a transcript of records detailing the modules completed together with the grades obtained and their ECTS equivalents.

## **X. Final provisions**

### **Art. 39** *Right of appeal*

<sup>1</sup> Rulings based on these academic regulations are forwarded to recipients in written form and accompanied by instructions on the right to appeal.

<sup>2</sup> According to the provisions contained in the Academic Ordinance Governing Bachelor's and Master's Degree Programmes at the Lucerne University of Applied Sciences and Arts, FH Zentralschweiz<sup>2</sup>, substantiated appeals against decisions taken in accordance with these academic regulations can be filed in writing with the head of programme. Appeals must be lodged within 20 days.

### **Art. 40** *Repeal of previous rules and orders*

The previous Academic Regulations Governing the Master's programmes in Applied Information and Data Science of 1 September 2022 are hereby repealed.

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<sup>2</sup> SRL No. 521

**Art. 41** *Entry into force*

These academic regulations shall enter into force on 1 September 2023 subject to approval by the Governing Council of the Lucerne University of Applied Sciences and Arts<sup>3</sup>.

Lucerne, 1 September 2023

**Lucerne School of Business**

Prof Dr Christine Böckelmann  
Dean

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<sup>3</sup> Approved by the Governing Council of Lucerne University of Applied Sciences and Arts on 31 August 2023.